

THE *Descriptiones*  
*Epidendrorum*  
OF J.G. KÖNIG  
1791

by Gunnar Seidenfaden



Haris G. Goukew '95

THE DESCRIPTIONES EPIDENDRORUM  
OF J.G. KÖNIG 1791

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of J.G. König 1791

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#### ABSTRACT

An attempt is made to analyse the descriptions by J.G. König of 24 Eastasiatic orchid species and supply correct names for these, resulting in a few sometimes surprising but inevitable new combinations.

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## · INTRODUCTION ·

**J**OHAN Gerhard König (29.II.1728 - 26.6.1785) was a pupil of Linné and went on his initiative in 1768 as a surgeon and naturalist to the Danish settlement in Trankebar from where he studied the eastern coast of Deccan, also visiting Ceylon, and in 1778-1780 he travelled under the auspices of the East India Company to countries east of the Indian Ocean, his easternmost landing was at Chantaburi in Southeast Thailand, most time he spent along the western coast of the Malayan Peninsula with many months' stay in the area of Phuket, Peninsular Thailand.

Besides large collections of natural objects, König left an enormous manuscript material which he on the initiative of Roxburgh, who attended to the last illness of the old friend, bequeathed to Joseph Banks; this is now bound in 21 large volumes at the British Museum. It is clear from this material, from his correspondence, and from publications by his contemporaries that König had a central role in the development of natural science and introduction into India of the Linnean ideas. But the vastness and imperviousness of the material have prevented full analysis and a few attempts in this direction have been incomplete. It is to be hoped that the broadly laid out study now in progress by the Danish student of history of science, Michael Sterll, will succeed in bringing König's work and life and his influence on contemporary Indian science fully into light.

The present paper is only a marginal contribution to such a study. It deals only with orchids and only with those orchids treated in König's single published paper on orchids, appearing in 1791 after his death, edited by Retzius. This paper has largely been disregarded by later authors; Willdenov (1805) transferred some taxa to other genera, Lindley has a few in synonymy, and Hooker f. (1890: 197-198) limited himself to a list of "Indian orchids of indetermined affinity" with only some hints on their identity. Perhaps one reason for Hooker's reluctance in dealing with König's plants could have been that he rightly guessed that they mostly were collected outside his area of "British India"; he says that "the descriptions are so full and good in all but the pollinia, &c. that local botanists may in time recognize most of them". Ridley (in Rendle 1933: 186-187) made some incomplete attempts to identification, and a few König taxa have been taken up by later authors.

After a survey of the available sources in published and unpublished literature and in herbaria, this paper records an attempt to follow Hooker's suggestion. Listed below are König's 24 taxa in the order in which he describes them. For each is first given the name by which I believe they should be recog-



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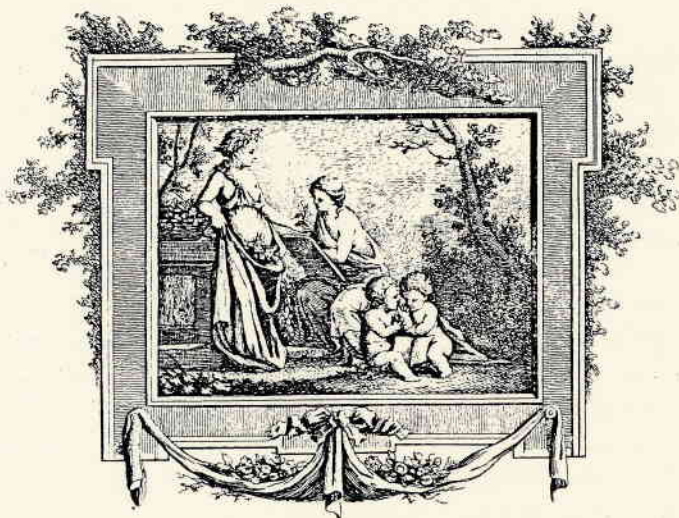
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DESCRIPTIONES EPIDENDRORVM

IN INDIA ORIENTALI FACTAE.



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nized, followed by the more important synonyms and adding only a short bibliography containing a few recent publications giving supplementary information. This is followed to the extent possible by information on nomenclatural history and on the locality of König's collections and the whereabouts of his specimens.

The present study must be considered the result of a teamwork, — several colleagues have been most helpful. Paul Ormerod is responsible for a very careful study of König's Latin descriptions which has led to convincing identification and he has also supplied several additions to the bibliographical notes. Michael Sterll has searched the König manuscripts for supplementary information on König's descriptions, travels, dates and localities, and has also searched around for possible present whereabouts of herbarium material. Leslie Garay has supplied valuable information from his vast archives. J. J. Wood has searched for authentic collections at Kew, and curators of other herbaria have likewise given valuable time-consuming assistance. I am most grateful for all this support without which the compilation had been impossible.

The Carlsberg Foundation has graciously supplied me with a computer, and my grandchildren have eagerly initiated me in its intricacies.

## · MATERIALS AND METHODS ·

THE *Descriptiones Epidendrorum* was published in 1791, six years after the death of König in Vol. 6 of Retzius' *Fasciculus Observationum Botanicarum*. Some authors have from this drawn the conclusion that Retzius should be considered author of the species proposed in the paper, and "Retz." is sometimes given as author of König's taxa. This must be considered a mistake, König's publication must be considered an independent separate paper (see the title page shown in Fig. 1).

Retzius received the manuscript from Professor Schreber in Erlangen, who must be supposed to have received it directly from König. Schreber was a pupil of Linné and got his doctorship in Uppsala under Linné's guidance in 1760. He was ten years younger than König, but they must have met after König in 1757 went to Uppsala to study under Linné.

We know that at least one more copy of the manuscript exists, it was sent by König to Linné fils in 1781 and is now found in the archives of the Linnean Society in London. It is identical with Schreber's manuscript with only two small but important exceptions. Firstly, the Linnean manuscript contains in a few places the date of König's collection; secondly, König has in a few cases added in the margin of the text some small figures, they are quite primitive, but still a help in the identification. Helpful with respect to dates is also König's *Journal of a Voyage from India to Siam and Malacca in 1779*, published in



English translation in 1894. Here the descriptions are few, but we learn a lot about König's itinerary, — see below.

It seems that the forwarding by König of his manuscript to Schreber was not for the purpose of publication, and it appears from a letter from König to Patrick Russel (19 September 1784) that he considered his manuscripts as unfinished and was unhappy with the publications. It seems evident, for example, that König as true disciple of Linné and the binominal nomenclature must have considered the use in a few cases of pre-Linnéan nomenclature as preliminary and not fit for publication.

In addition to König's publications we have available his enormous manuscript collection sent to Banks and now in the British Museum. Mr Sterll has searched for information on orchids in this vast material and has in several cases found descriptions, evidently of a preliminary nature, but sometimes giving additional hints towards identification or localization.

For many years the *Descriptiones* was overlooked or more or less disregarded by later students. Willdenow (1805) included little more than half of the 24 taxa in his enumeration, eight of which he transferred to *Limodorum*, three to *Cymbidium* and two to *Aerides*. Lindley (1830-40) gave the authorship of König's taxa to Retzius, he includes the publication in his reference list but I doubt if he ever studied the paper, only enclosing the plants listed by Willdenow. Anyway, here he made some transfers and he placed two taxa in his postscript (1840: 537), not being able to select a genus for them. Surprisingly, however, Lindley (1830: 33) mentions an "*Epidendrum biflorum* Koen. Mss." from Ceylon, on this see p. 51.

Hooker f. (1890: 753) found at Kew a specimen he considered a König collection of *Epidendrum sessile* and referred it to *Bulbophyllum clandestinum* Lindl.; this entity was taken up by J.J. Smith (1905: 448), see the notes below under no. 20. Hooker f. found another König specimen at Kew referring it to *Dendrobium atropurpureum*, on this see the note to no. 6 below. Otherwise, Hooker f. limited himself to an enumeration (1890: 197) of König's taxa, as mentioned above he believed these plants to be outside the British Empire.

At the end of his paper on König, Rendle (1933: 186) mentions the *Descriptiones* and he supplies a list of tentatively suggested names given him by Ridley. This list has been overlooked by all later students, and it must be underlined that it was not available to Ormerod when he forwarded his proposals, — a comparison of Ridley's and Ormerod's names is therefore of interest.

To close the list of earlier literature it should be noted that Garay (1972) made three transfers of König's taxa, see nos 7, 10 and 11.

Contrary to most contemporary students Köning presented very careful, long and detailed descriptions, so the analysis of these in most cases can lead to a rather safe decision on their identity. In a few instances we find attempts

to such identification, but in the present paper the painstaking work of identification of the insects is not possible.

Like most of the other authors supplementing the collections. Study of the insects is too often hampered by the lack of material.

Only in a few cases are the *tiones*. A few of the taxa gained through the publication in the British Museum of the taxa in the *Journal of a Voyage to Malacca* around Malacca.

A digression into the history of the collection, König's active all-round observations of marine expositions near the sea, to the beach, to the beach, rent. König's beloved "J" but he was of marine corals or a opportunity in villages, races, religious local products, his personal mate and

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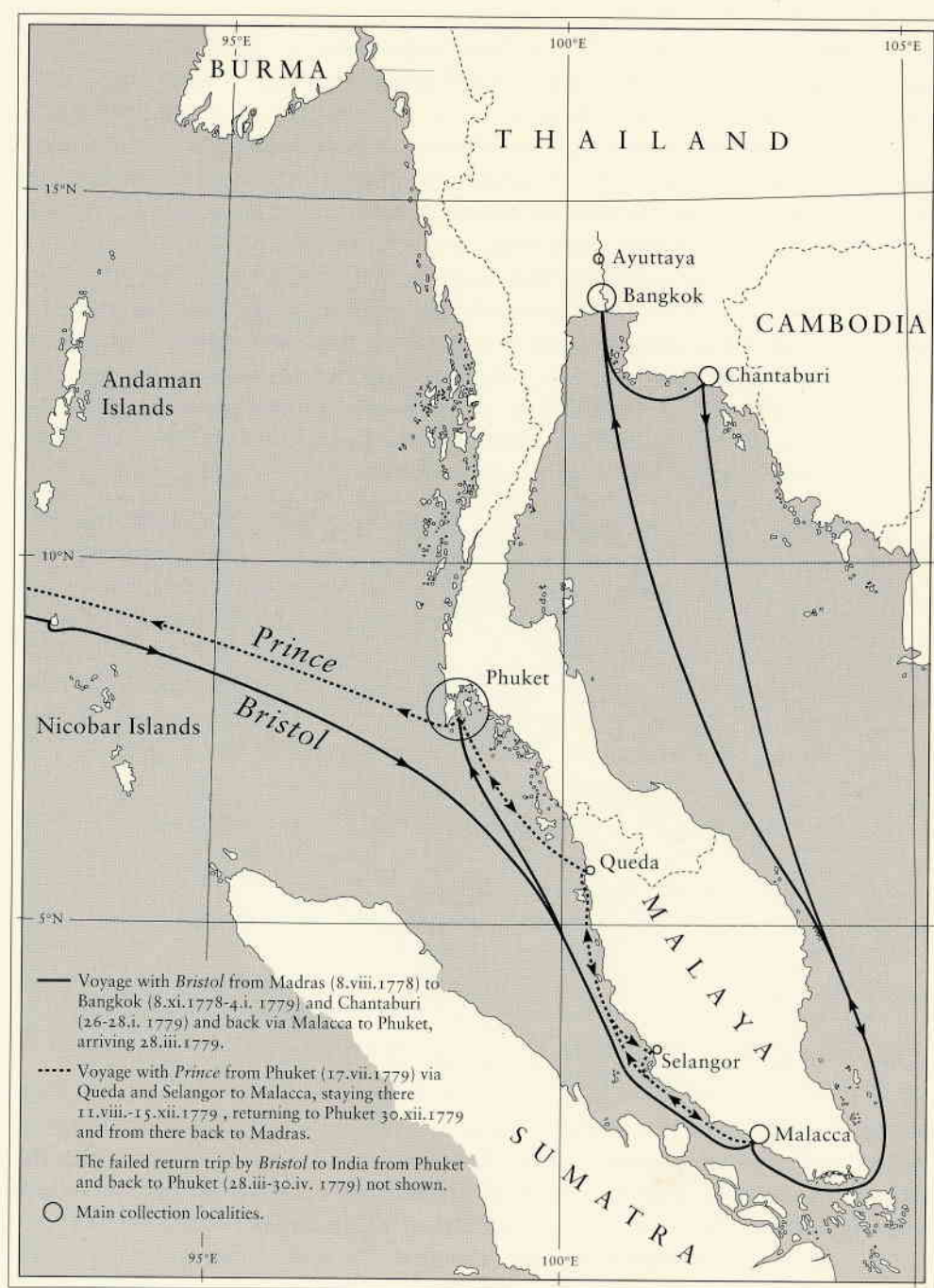


Fig. 2. Sketch map roughly indicating König's itinerary and main localities, based on the diary in *Journal of a Voyage*.

König's geographical names are often antiquated, forgotten or misspelled. For the Phuket area, however, we get good guidance in the paper by Gerini, *Historical Retrospect of Jungceylon Island* (1905), which contains a long chapter (p. 152-161) on König's stay around Phuket, with complementary comments. Jungceylon was the century-old name for Phuket where the seafarers had a meeting place with safe anchorage and which was centre for the tin-trade of the area. König used the name Junkceylon with different spelling for the Phuket area, his most important orchid collecting area.

In order to substantiate our identifications we have searched for König herbarium material, especially of those taxa treated in the *Descriptiones*. It looks as if there are remarkably few orchids in the material he sent to Europe. The collection he sent to Lund has been studied by C.E.C. Fischer (1932), he found 346 specimens; none of them were orchids, and Dr Lassen in Lund has recently informed me that no König orchids are present at Lund. The herbarium König sent to Copenhagen and which comprises some 1800 specimens has been preliminarily catalogized by Drs B. Hansen and I. Friis, who now together with Mr Sterll are trying to get financial support for a thorough treatment and publication in line with the recent publication on Forsskål's plants (Hepper & Friis 1994). They believe only two orchids are included here. Sterll has searched for material in the British Museum, and I have been sent 4-5 specimens which are clearly König plants, I believe they are from Ceylon and the Coromandel Coast and not included in the *Descriptiones* and I believe they may have been included in the material sent to Banks.

Considering König's great interest in "Epidendra" this scarcity is in need of explanation. Naturally they may have been sent to other correspondents and may be hidden in other herbaria. It would be natural to believe that König had sent orchid material to Schreber together with his manuscript. Schreber's herbarium is now in München, but not kept separate and the curator found it difficult to find time to search for König specimens, accordingly Sterll visited the herbarium, disappointingly only a single König orchid was located, *Epidendrum lycopodioides*, which is represented also in Kew and Liverpool. Another explanation is that the collections may have been lost, we know how great difficulties König met with in keeping his herbarium dry in the humid and rainy climate and orchids are always difficult to dry.

A part solution — perhaps the whole — is that most of König's collections remained in India after his death. Perhaps König kept the orchids apart in the hope of finalizing his manuscript. Our interest accordingly turned to the Rottlerian herbarium.

Rottler (1749-1836) was after Heyne the last successor to König at the Trankebar Mission, which he joined in 1776, remaining in India for 60 years. He assembled minor sets of herbaria, which he sent to Schreber, Vahl, Lessert and Wallich. The larger part of his herbarium remained in India and



with his death was bequathed to the Vepery Mission in Madras from where it was sent to King's College in London (Burkill 1965: 49).

Recently Matthew (1993: 32) calls to our attention that while the register of the Rottlerian herbarium which is now at Kew, lists 5000 specimens, there are in Kew only some 1800 specimens, received from King's College in 1872. It seems that what happened is that Royle, who was professor at King's College at the time the collection was sent to Kew, took out for his own use some 2000 specimens. These are now in Liverpool (Stansfield 1957, Harrison 1978).

Accordingly, during visits to Kew and Liverpool, Mr Sterll took out for me a series of orchids that he judged could be König specimens. While the Kew specimens all carry besides the "Herb. Rottl. 1872" several annotations and labels assisting in the judgement of the proveniens, the Liverpool material are more sparsely labelled, but they all have the note "HR, with a number" indicating the Royle herbarium.

It is on the basis of the above mentioned literature, published and unpublished and the herbarium material so far located that the following annotated list of König's 24 taxa in the *Descriptiones* is undertaken. Undoubtedly, more manuscript information may be dug up, and more herbarium sheets found hidden in the herbaria. The present paper — still with several deficiencies — may then be of assistance to future students.

## · ANNOTATED LIST OF THE 24 TAXA ·

### No. 1. *Epidendrum spathulatum* Kiphun

#### *Aerides odorata* Lour.

Fl. Cochinchin. 2: 525, 1790. — For bibliography and (some) synonyms, see e.g. Seidenfaden 1988: 242.

Type: Probably Vietnam, Loureiro, type BM, isotype K.

Distribution: From NW Himalaya eastwards to Vietnam and the Philippines, south through Thailand and Malaysia to Indonesia.

*Epidendrum spathulatum* Koen., in Retz. Obs. 5: 43, 1791, nom. illeg.

*Aerides suavissimum* Lindl. Ridley, in Rendle 1933: 185.

Type: Probably Phuket, Thailand, König. LIV (HR 25!).

I have tried in vain to figure out what "Kiphun" stands for; it may be a local plant name or a locality name which I have not found in maps or the literature.

König's name is illegitimate due to an earlier homonym. Based on the description by König, Ormerod without hesitation refers the taxon to *Aerides*

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*odorata*, and we are in the lucky position to be able to verify this by material present in LIV. This consists of inflorescences (wrongly mounted together with so far unidentified vegetative parts of a terrestrial orchid), it is labelled with König's name and a reference to a description in the unpublished manuscript ("vide descr. Lit. B. p. 57") and to Retz. Obs. 6: 43. It belongs to the Royle/Rottler herbarium.

König's taxon has only scarcely been referred to in earlier literature. Hooker f. (1890: 197) wrongly suggests it may be *Vanda spathulata* (L.) Spreng (now *Taprobanea spathulata* (L.) E. A. Chr.), probably misled by König's specific epithet. Ridley (in Rendle 1933: 186) proposed the name *Aerides suavissimum* Lindl., this is so far correct as we today consider that taxon conspecific with *A. odorata*.

The species is very common on the islands around Phuket and König's plant was probably collected there.

We have in Copenhagen a specimen received from König, which is named *Epidendrum spathulatum*; this is incorrect, the plant is *Dendrobium crumenatum*, see no. 18 below. It is not clear if the name was added after arrival in Copenhagen or if König added it at an early time before he decided on his nomenclature.

## No. 2. *Epidendrum variegatum*

### *Malaxis calophylla* (Rchb. f.) Kze.

Rev. Gen. 2: 573, 1891. – For bibliography and synonyms, see e.g. Seidenfaden 1978: 54; Seidenfaden & Wood 1992: 223; Wood & Cribb 1994: 99.

*Epidendrum variegatum* Koen., in Retz. Obs. 6: 44, 1791, nom. illeg.

Type: "Malacca", cult. Hamburg, W!.

Distribution: Nepal, Sikkim, Burma, Thailand, Malaysia, Borneo.

König's name is illegitimate due to the earlier homonym by Swartz (an *Oncidium*).

As far as I can see, no earlier students have attempted an identification. König's description is very detailed and complete and Ormerod has studied it word for word, his identification is convincing. So far we have not located any König material. We have found the species in several places in Peninsular Thailand, and König's collection was probably made in Phuket.

König in his description includes with a questionmark a reference to "*Folium peltatum* Rumph. Herb. Amb. P. vita p. 93, Fig. 3". This entity has by J. J. Smith been referred to *Anoectochilus reinwardtii*, with some uncertainty because it is without flowers. König's suggestion can presumably be disregarded.

### No. 3. *Epidendrum calceolariae*

#### *Dendrobium acerosum* Lindl.

Bot. Reg. 30: misc. 86, 1841. – Ridley, in Rendle 1933: 186. – For bibliography and synonyms, see e.g. Seidenfaden 1985: 238; Seidenfaden & Wood 1992: 423; Wood & Cribb 1994: 239.

*Epidendrum calceolariae* Koen., in Retz. Obs. 6: 45, 1791.

*Cymbidium calceolariae* (Koen.) Willd., Sp. Pl. 4: 97, 1805.

Type: Singapore, Cuming 357, Herb. Lindl. K!.

Distribution: Tenasserim, Thailand, Malaysia.

König's description leads unmistakably to *Dendrobium* sect. *Strongyle*, the decision on species is slightly uncertain as the species of the section have rather uniform flowers and we have not yet found König material, but we have settled on *D. acerosum* which is the most common of the section in Peninsular Thailand; there is little doubt that König's collection came from Phuket. Ormerod's identification was made without knowledge that Ridley had proposed the same name.

König's specific epithet would have priority, but is not available in *Dendrobium* due to the use for another plant (now *D. moschatum*).

### No. 4. *Epidendrum hexandrum*

#### *Appendicula hexandra* (Koen.) J.J. Sm.

Bull. Buitz. 3.s. 12: 119, 1912. – For bibliography and synonyms see e.g. Seidenfaden 1986b: 140 & 1992: 200.

*Epidendrum hexandrum* Koen., in Retz. Obs. 6: 45, 1791.

*Appendicula koenigii* Hk.f., Fl. Brit. Ind. 6: 84 & 198, 1890. Ic. Pl. T.2149, 1893.

*Podochilus hexandra* (Koen.) Schltr., Bull. Herb. Boiss. 21: 27, 1900.

Type: Thailand, presumably Phuket, König, Herb. Rottl. K!, LIV (HR 21!).

Distribution: Southeast & Peninsular Thailand, Laos, Cambodia, Mentawi Islands.

Hooker f. placed this plant in *Appendicula* applying the Kew rule when choosing the specific epithet. This was corrected by Schlechter, who placed it in *Podochilus*, J.J. Smith stands for the present name.

Hooker f. found the König collection at Kew, not knowing the locality but giving the collection year 1779 from the label, which also gives a reference to a König manuscript ("Lit. B, 1779") and to Retz. Obs. 6: 45. See Fig. 3, the basis for the somewhat beautified illustration by Hooker f. (Ic. Pl. T.2149, 1893).



5 cm



HERBARIUM ROTTERIANUM.  
PENINS. INDIAE ORIENTALIS.

Presented by the Council of King's College, Feb. 1872.

*Epidendrum hexandrum*

videt. Defun. Lib. N. 1779.

Bag 42 D. 47.  
Botan. Den. Bot. 6. p. 45.

*Appendicula hexandra* (Koen.) J.J. Sm. 1

(Type of *Epidendrum hexandrum* Koen.)

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Fig. 3. *Appendicula hexandra* (Koen.) J.J. Sm.  
Type specimen at Kew of no. 4. *Epidendrum hexandrum* Koen.  
with sketches by Hooker f.  
Photo: Courtesy of Royal Botanic Gardens, Kew.

Dec. 11. 1867

Det. H. B. K.

Earlier I suggested that König collected the plant in Southeast Thailand, where he visited Chantaburi 26-28 January 1779, I now rather suggest that he got it at Phuket where he stayed several months later in the year. The species is quite common both in the Southeast and in the Peninsula.

## No. 5. *Epidendrum ophrydis*

### *Malaxis ophrydis* (Koen.) Ormerod comb. nov.

*Basionym*: *Epidendrum ophrydis* Koen., in Retz. Obs. 6: 46, 1791.

*Malaxis latifolia* J.E. Sm., in Rees Cyclop. 22, 1812. – For bibliography and many synonyms, see e.g. Seidenfaden 1978: 45.

*Microstylis congesta* (Lindl.) Rchb.f., in Walp. Ann. 6: 206, 1861. – Ridley, in Rendle 1933: 186.

*Type*: Thailand, presumably Phuket area, König, Herb. Rottl. K!; LIV HR 40!.

*Distribution*: Widespread from Ceylon, India and Himalaya eastwards through China, Ryukyu and the Philippines, south through Malaysia, Indonesia to New Guinea and Australia.

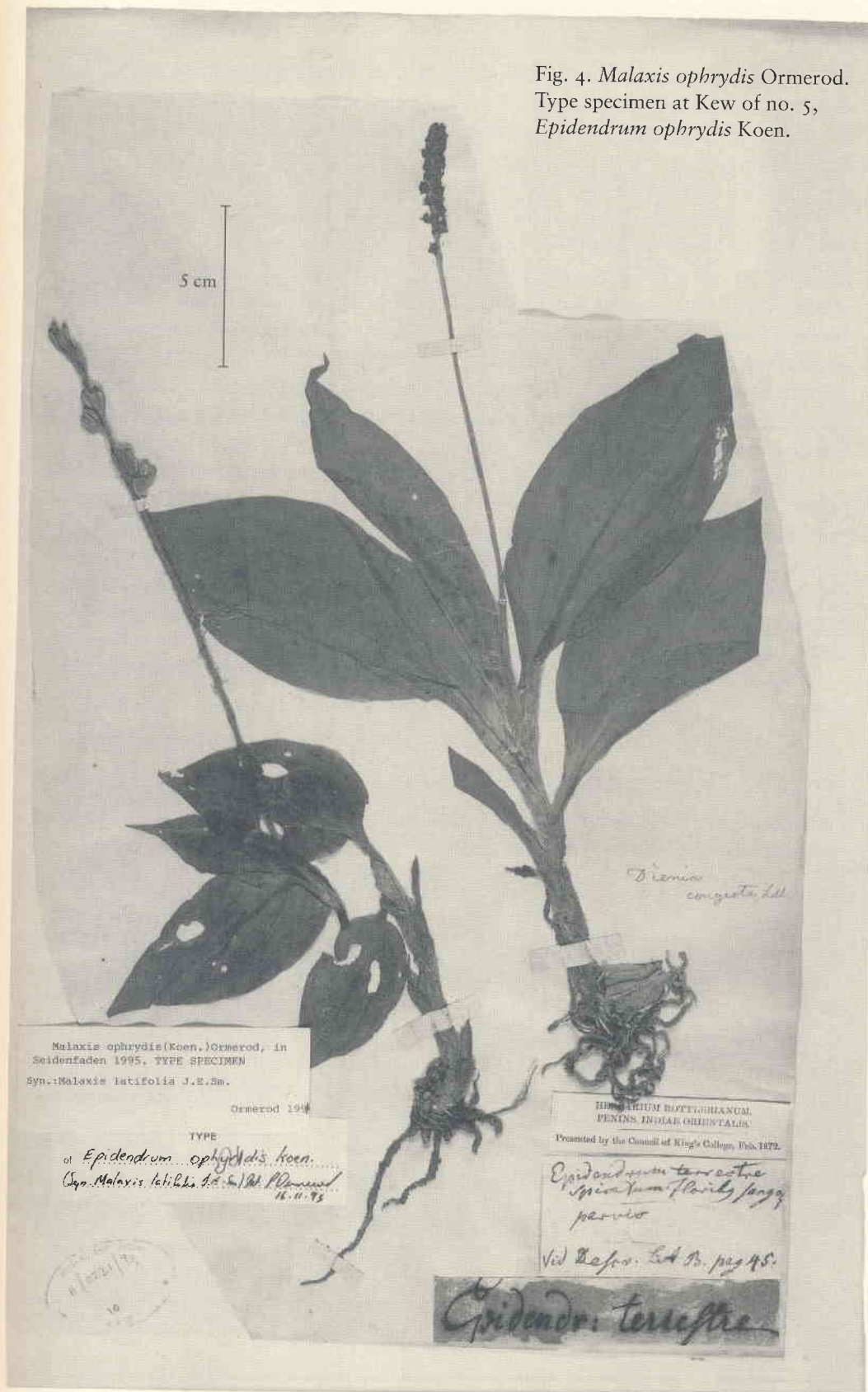
The existence of good type material both at Kew and Liverpool confirms the identification by Ormerod. Unknown to Ormerod, already Ridley had the same idea, using the older name *Microstylis congesta*. The collection at Kew is labelled i.a. with a reference to the BM manuscript ("Lit. B, pag. 45"). See Fig. 4.

The species is so common and widespread in a large area that the application of the priority rule may raise a feeling among many students that an action to conserve J.E. Smith's old specific epithet should be undertaken. On the other hand, the commercial, horticultural or hybridization interests are so minimal that I doubt if such action would gain a majority, so we will have to defer to the deplorable fact that taxonomists through 200 years have overlooked König's work.

## No. 6. *Epidendrum Herba Supplex minima?* Rumph.

Rumphius used the *Herba Supplex* for a series of plants mainly referable to *Dendrobium* sect. *Oxystophyllum*. I do not believe he had the *minima* and it is uncertain if König by using it wanted to establish a new species (no. 6A below?), more likely it is a slip of the pen for *minor* (no. 6B below), an entity today referred to *Dendrobium moluccense* J.J. Smith (1914: 11, see also

Fig. 4. *Malaxis ophrydis* Ormerod.  
Type specimen at Kew of no. 5,  
*Epidendrum ophrydis* Koen.



Merrill 1917: 175, who adds it is neither *Dendrobium concinnum* Miq. nor *D. atropurpureum* Miq.).

Clearly, by using pre-Linnean names and adding a questionmark König was uncertain and must have considered his treatment unfinished, a reason why he was unhappy with premature publications.

Our treatment of this taxon has not been without difficulties. Based on the published description Ormerod is convinced that the plant is an *Oberonia*, an opinion shared by Ridley (in Rendle 1933: 186). On the other hand I studied a König plant in the Rottlerian herbarium at Kew which was named "*Herba simplex* Rumphius 6: T.50, f.2" (i.e. *Herba supplex minor*), with additional reference to an unpublished description ("Litera A 1779) and reference to Retz. Obs. 6: 67. This specimen was studied by Hooker f. (1890: 197) who referred it to *Dendrobium atropurpureum* Miq.; I rather suggest it is *D. concinnum* Miq.

I feel that the only solution to this discrepancy is to accept that König has mixed two species, and this view is confirmed by Sterll's study of the BM manuscript, where he has found two quite different descriptions, the one in "J.XI: 171" fits with König's published description, while quite another is contained in "J.IX: 287-88". The reference on the label on the Kew specimen studied by Hooker f. saying "Retz. Obs. 6: 67" added after König's death is therefore incorrect.

Accordingly I list below two different taxa: no. 6A the one described in the published paper, and no. 6B not included there.

#### No. 6A. *Oberonia* sp.

*Epidendrum Herba Supplex minima*? Rumph., Koen., in Retz. Obs. 6: 67, 1791.

*Oberonia prainiana* auct. non King & Pantling; Ridley, in Rendle 1933: 186.

König collected this plant in the Phuket area towards the end of May 1779. He notes in his diary (1894: 48) for 25 May "... described the smallest *Epidendrum* which was of the kind called *Herba suppl.* by Mr Rumph. The leaves are swordshaped, and the one sheathes the other. The blossoms grow together in a single fine thin spike. They are verticillate, very small and red in colour; the fruit is ball-shaped". The fuller Latin description confirms that this is an *Oberonia*. Ridley suggests that it is *O. prainiana*, and I had been inclined to follow him as *O. prainiana* is the only species recorded from the Malayan Peninsula with verticillate red flowers.

Ormerod, however, does not agree to this identification. He compares König's description with that of King & Pantling as follows:

König's description: 5-7 leaves, 5-6 cm long, no stem. Inflorescence 5-6 cm (foliis longiores) with sessile verticells of flowers. Floral bracts lanceolate,



Merrill 1917: 175, who adds it is neither *Dendrobium concinnum* Miq. nor *D. atropurpureum* Miq.).

Clearly, by using pre-Linnean names and adding a questionmark König was uncertain and must have considered his treatment unfinished, a reason why he was unhappy with premature publications.

Our treatment of this taxon has not been without difficulties. Based on the published description Ormerod is convinced that the plant is an *Oberonia*, an opinion shared by Ridley (in Rendle 1933: 186). On the other hand I studied a König plant in the Rottlerian herbarium at Kew which was named "*Herba simplex* Rumphius 6: T.50, f.2" (i.e. *Herba supplex minor*), with additional reference to an unpublished description ("Litera A 1779) and reference to Retz. Obs. 6: 67. This specimen was studied by Hooker f. (1890: 197) who referred it to *Dendrobium atropurpureum* Miq.; I rather suggest it is *D. concinnum* Miq.

I feel that the only solution to this discrepancy is to accept that König has mixed two species, and this view is confirmed by Sterll's study of the BM manuscript, where he has found two quite different descriptions, the one in "J.XI: 171" fits with König's published description, while quite another is contained in "J.IX: 287-88". The reference on the label on the Kew specimen studied by Hooker f. saying "Retz. Obs. 6: 67" added after König's death is therefore incorrect.

Accordingly I list below two different taxa: no. 6A the one described in the published paper, and no. 6B not included there.

#### No. 6A. *Oberonia* sp.

*Epidendrum Herba Supplex minima*? Rumph., Koen., in Retz. Obs. 6: 67, 1791.

*Oberonia prainiana* auct. non King & Pantling; Ridley, in Rendle 1933: 186.

König collected this plant in the Phuket area towards the end of May 1779. He notes in his diary (1894: 48) for 25 May "... described the smallest *Epidendrum* which was of the kind called *Herba suppl.* by Mr Rumph. The leaves are swordshaped, and the one sheathes the other. The blossoms grow together in a single fine thin spike. They are verticillate, very small and red in colour; the fruit is ball-shaped". The fuller Latin description confirms that this is an *Oberonia*. Ridley suggests that it is *O. prainiana*, and I had been inclined to follow him as *O. prainiana* is the only species recorded from the Malayan Peninsula with verticillate red flowers.

Ormerod, however, does not agree to this identification. He compares König's description with that of King & Pantling as follows:

König's description: 5-7 leaves, 5-6 cm long, no stem. Inflorescence 5-6 cm (foliis longiores) with sessile verticells of flowers. Floral bracts lanceolate,

acute, glabrous, longer than ovary. Sepals linear lanceolate, spreading, petals slightly broader, concave, and coloured (coccinea/red) incurved towards each other. Lip with broad base, terminated with an obcordate midlobe.

King & Pantling's description: Leaves 1.3-2 cm, stem very short. Spike many times longer than leaves. Floral bracts equalling the ovary. Sepals oblong blunt, entire, revolute. Petals narrowly elliptic, coarsely and unequally serrate, spreading. Lip elliptic-lanceolate, blunt, not distinctly lobed, but everywhere irregularly lobulate erose. Flowers warm brown.

Ormerod must be right that these two descriptions cannot cover the same species, and we must find another name for König's plant. I do not believe it will be found among species so far recorded from the Malayan Peninsula or mainland Asia as a whole; it may be one of the many species found in Indonesia. For fuller clarification we need to locate a König specimen, or new finds in the Phuket area may lead to a solution.

#### No. 6B. *Dendrobium concinnum* Miq.

Fl. Ind. Bat. 3: 644, 1859. – For bibliography and synonyms see e.g. Seidenfaden 1985: 229; Seidenfaden & Wood 1992: 419; Wood & Cribb 1994: 245.

*Epidendrum Herba Supplex* Koen., in sched., nom. illeg.

*Dendrobium atropurpureum* auct. non Miq.: Hooker f., Fl. Brit. Ind. 6: 1, 1890.

Type: Java, Salak, Blume s.n. K! L!

Distribution: Burma, Thailand, Indochina, Malaysia, Indonesia.

The specimen in Herb. Rottl. at Kew has a label we believe is in König's hand saying: "*Epidendrum Herba Supplex* Rumph. 6: T. 50, Fig. 2" and an addition which must be later says "Retz. Obs. 6: 67"; this is an error. Hooker f. identified the specimen as *Dendrobium atropurpureum*.

Some of the rather confusing history of the sect. *Oxystophyllum* is related elsewhere (Seidenfaden 1985: 227) resulting in the opinion that all plants of the section in Thailand belong to *D. concinnum*; I believe the collection comes from Phuket.

König's specimen has only one inflorescence with small budding flowers, too small for a dissection; perhaps my identification should be met with some caution.

There are some small specimens in Liverpool (HR38!) without flowers, which I believe belong to the same collection.



## No. 7. *Epidendrum orchideum*

### *Trichoglottis orchidea* (Koen.) Garay

Bot. Mus. Leaflet. Harv. Univ. 22(4): 201, 1972 (excl. syn.).

*Epidendrum orchideum* Koen., in Retz. Obs. 6: 48, 1791.

*Limodorum orchideum* (Koen.) Willd. Sp. Pl. 4: 126, 1805.

?*Ceratochilus orchideus* (Koen.) Lindl., Gen. & Sp. Orch. 1833: 232. – Ridley, in Rendle 1933: 186.

*Aratochilus orchidous* Ridl. in König 1894: 67, nom. nud. (misprint?).

Type: Thailand, Laem Yamu, Phuket, 7°59'N lat., König, 5 June 1779, material not yet located.

*Trichoglottis cirrhifera* Teijsm. & Binnend., Nat. Tijds. Ned. Ind. 5: 493, 1853. Syn. nov. For bibliography and further synonyms, see e.g. Seidenfaden 1988: 83; Comber 1990: 368; Seidenfaden & Wood 1992: 601.

Type: Java, Salak, Teijsmann & Binnendijk.

Distribution: Nicobar Islands, Thailand, Indochina, Peninsular Malaysia, Java.

Ormerod sent an elaborate analysis of König's description undisputably demonstrating that *Trichoglottis cirrhifera* Teijsm. & Binnend. must be considered conspecific, at the same time he feels that the inclusion by Garay of *Tricoglottis quadricornuta* Kurz as a synonym should be considered a mistake. *T. quadricornuta* is probably endemic in the Andamans. I have not seen material of that taxon.

*Trichoglottis cirrhifera* is very common in Peninsular Thailand, König made his collection on 5 June 1779 at "Pullu Jambo", the correct name of which today is Laem Yamu (Gerini 1905: 157). We have not yet located a König specimen.

Lindley with a questionmark placed König's plant in the genus *Ceratochilus* Bl., just citing Willdenow's much abbreviated description. This is a rare Indonesian genus with only two species, one Blume's type species from Java, the other a recently established species, *C. jiewhoei* Wood & Shim (in Chan et al. 1994: 93) from Borneo. Lindley undoubtedly did not see a König specimen or his description. It is still a mystery to me that Ridley in an anonymous footnote (in König 1894: 67) calls the plant *Aratochilus orchidous*, a genus unknown to me. Perhaps he intended to propose a new genus, but later gave it up: in 1933 he just repeated Lindley's suggestion. Or it may simply be a misprint for *Ceratochilus*.

## No. 8. *Epidendrum pusillum*

### *Taeniophyllum pusillum* (Willd.) Seidenf. & Ormerod comb. nov.

Basionym: *Limodorum pusillum* Willd., Sp. Pl. 4: 126, 1805.

*Epidendrum pusillum* Koen., in Retz. Obs. 6: 49, 1791, nom. illeg. (non Linné 1753).

*Oeceoclades retzii* Lindl., Gen. & Sp. Orch. 1833: 237.

*Chiloschista pusilla* (W.) Schltr., Fed. Repert. Beih. 4: 275, 1919 nom. tantum.

*Sarcochilus wightii* auct. non Hk.f.: Ridley, in Rendle 1933: 186.

*Taeniophyllum biocellatum* auct. non J.J. Sm.: Comber 1990: 360 p.p. (only the two uppermost photographs).

Type: Thailand, Phuket, König s.n., material not yet located.

*Taeniophyllum obtusum* Bl. Bijdr. 1825: 357, syn. nov., for bibliography and synonyms etc. see e.g. Seidenfaden 1988: 18.

Type: Java, Mt. Burangrang, Krawang, Blume s.n. BO.

Distribution: Thailand, Cambodia, Peninsular Malaysia and Singapore, Borneo, Sumatra, Java.

Even if we have not yet located a König specimen, there seems no doubt after Ormerod's study of König's very full description, that his plant is conspecific with Blume's taxon. This is quite common in the Malayan Peninsula. The only other species with which it might be confused is *T. calceolus* Carr which seems closely related and not uncommon in the Peninsula. Carr's very careful description of that entity, e.g. of the colour scheme of the flowers, seems to exclude conspecificity. It may be noted that Ormerod in his search among similar plants from Indonesia has found that two of the photographs (the two uppermost) supplied by Comber (1990: 360) under the name *T. biocellatum* represents *T. pusillum*. The lowermost photograph may well represent *T. biocellatum* J.J. Smith, but according to Garay (1972: 206) this is a superfluous name for *T. fornicatum* Bl., he points at the validity of the older name due to Blume's illustrations in the Tabellen (1825b: LXX), which was disregarded by J.J. Smith (1905: 625) who furthermore believed *B. fornicatum* could be conspecific with *T. hasseltii* Rchb.f. without drawing the nomenclatural consequences. It should also be noted that Du Puy et al. (1993: 527) suggest that *T. calceolus* Carr could be conspecific with *T. hasseltii*. There is some need for clarification here, these problems however hardly influence the position of *T. pusillum*.

On the above bibliography it may be noted that we cannot use König's *Epidendrum pusillum* as basionym on account of the earlier homonym used by Linné for a plant now called *Psygomorchis pusilla* (L.) Dressler & Dodson. The valid basionym is *Limodorum pusillum* Willd., giving the name priority from 1805, twenty years before Blume's *T. obtusum*. Some confusion was

introduced when Lindley (1833: 237) proposed a large number of new taxa in his genus *Oeceoclades*, two of which are relevant here. The first of these is *Oe. pusilla* Lindl., his syntypes being the two collections listed in Wall. Cat. 1832 no. 7332. The 7332a is a plant collected by De Silva in Sylhet, the 7332b is a plant found in Wight's herbarium without origin and to which is added a questionmark. This questionmark can now be removed after the finding by J. J. Wood (pers. comm.) that a and b are identical. They are both referable to *Saccolabiopsis pusilla* (Lindl.) Seidenf. & Garay (cf. Seidenfaden 1988: 225). But the questionmark must have a reference to Lindley's note under *Oe. pusilla*, "An *Oe. Retzii* hujus loci, foliis delapsis?". For the second, *Oeceoclades retzii*, Lindley repeats Willdenow's short description of *Limodorum pusillum* and has this in synonymy (basionym), also mentioning "*Epidendrum pusillum* Retz. Obs. 6: 49", i.e. König's plant. Lindley prevented himself from using the specific epithet *pusillum* by using it for another plant a few lines above.

Hooker f. (1890: 37) established *Sarcochilus wightii* based on an illustration by Wight (1851: Pl. 1741 except the left hand figure) which Wight wrongly had referred to *Chiloschista usneoides*. Hooker's new taxon has recently ended up with a new name, *Chiloschista fasciata* (F. v. Muel.) Seidenf. & Ormerod (cf. Seidenfaden 1995: 66). It is evident that Hooker f. (probably misled by the note by Lindley referred to above) believed Wight's illustration to represent Lindley's *Oeceoclades retzii*, and he cites this in his text together with other synonyms.

The above is necessary for the understanding of the establishment by Schlechter (1919: 275) of *Chiloschista pusilla* (W.) Schltr. as a new name for Hooker f.'s *Sarcochilus wightii*, the "W." in the authorship going back to Willdenow. The introduction of "Retz." by Garay & Taylor (1976: 276) does not alter the situation. Naturally, the use by Ridley of *Sarcochilus wightii* (in Rendle 1933: 186) refers to König's plant, only misapplied.

## No. 9. *Epidendrum complanatum*

### *Thrixspermum centipeda* Lour.

Fl. Cochinch. 2: 520, 1790. – For bibliography, synonyms etc. see e.g. Seidenfaden 1988: 152 ff.; Seidenfaden & Wood 1992: 643.

*Epidendrum complanatum* Koen., in Retz. Obs. 6: 50, 1791.

*Limodorum complanatum* (Koen.) Willd., Sp. Pl. 4: 126, 1805. – Lindley 1833: 227.

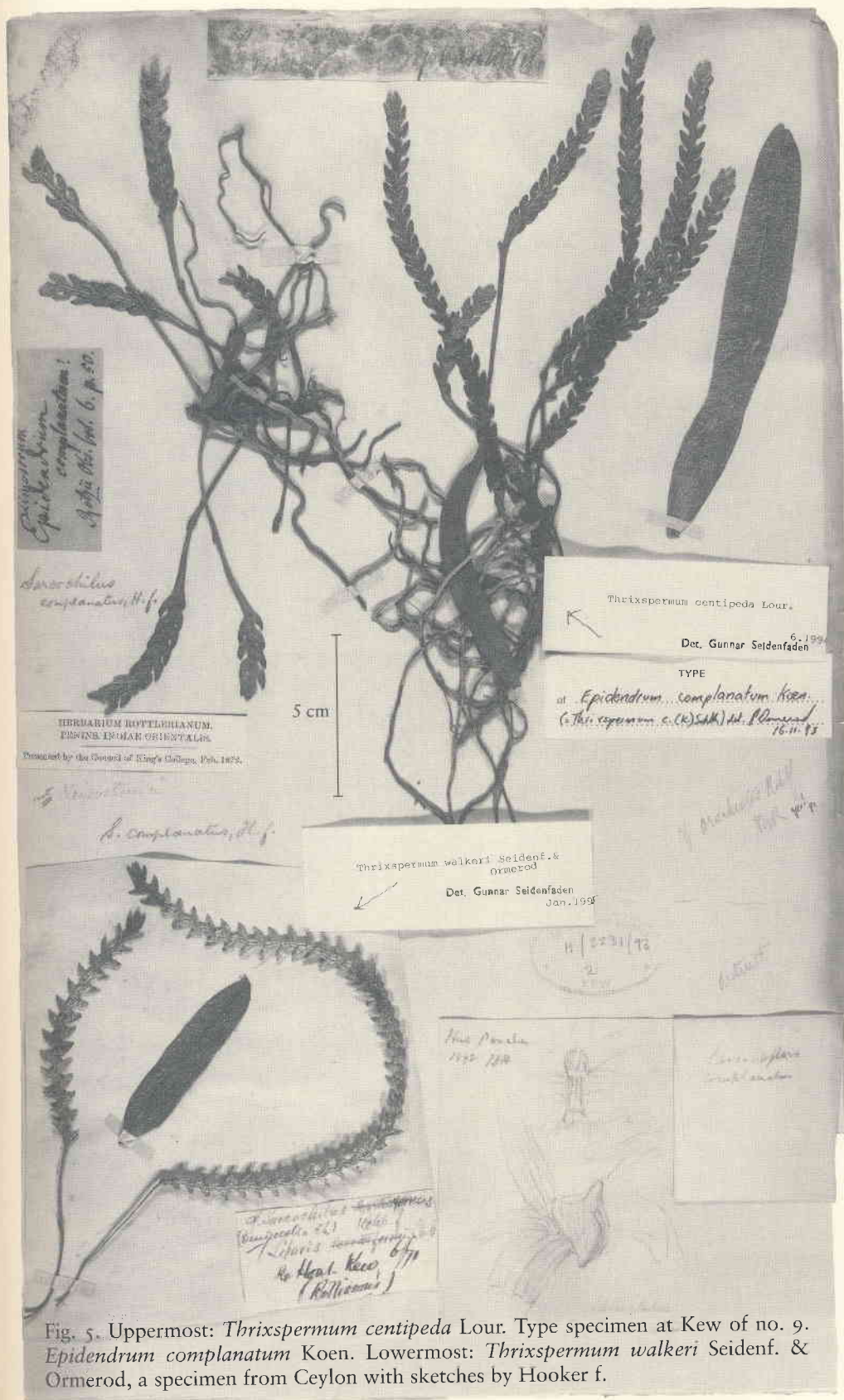
*Cleisostoma complanatum* (Koen.) Lindl. ex Steud., Nomencl. 1840: 378.

*Sarcochilus complanatum* (Koen.) Hk. f., Fl. Brit. Ind. 6: 41 p.p., 1890.

*Thrixspermum complanatum* (Koen.) Schltr., Orchis 5: 55, 1911 (excl. distribution).

Type: Cochinchina, Loureiro sine no. BM.

Distribution: Widespread from Bhutan and Assam eastwards through whole Southeast Asia, Indonesia, Borneo and the Philippines.





In the Rottlerian herbarium at Kew is a collection labelled i.a. Retz. Obs., which we believe must be considered a König type specimen. There is an identical plant in LIV (HR45). They were collected near Phuket on 7 June 1779. Based on these and König's description we are convinced this entity must be referred to *Thrixspermum centipeda* Lour., a widespread species very common in Peninsular Thailand.

When Steudel transferred König's taxon to *Cleisostoma*, it must have been because Lindley had listed *Limodorum complanatum* with a question-mark in his treatment of *Cleisostoma*. Steudel evidently felt that Lindley should have the credits for this transfer.

When Hooker f. (1890: 41) transferred König's plant to *Sarcochilus* he based his description on Ceylonese material underlining the differences between this and *Sarcochilus arachnites* Rchb.f. (= *Thrixspermum centipeda*). The consequence is that his description must cover another entity, which we describe below as a new species. The situation is illustrated by a sheet at Kew, a photograph of which is shown in Fig. 5. The uppermost plant I consider König's type of *Epidendrum complanatum* from Phuket, the lowermost plant received from Peradenya and sketched by Hooker f. in 1898 is the new species. Interestingly, the difference was already noted by Rolfe, who in fine pencil wrote "*S. arachnites*" near the upper plant and "distrust" near the lower.

***Thrixspermum walkeri* Seidenf. & Ormerod sp. nov.**

*Sarcochilus walkeri* Hk.f., in sched., nom. unpublished.

In sectionem *Thrixspermum* referendum, *T. centipeda* affine, floribus multo minoribus, sepalis et petalis circiter 12 mm longis apicibus acutis non clavatis, labello cupulam sessilem formante lobo medio minuto incurvo callo parvo in cavo sito ut aliis notis ab eo diversum.

Type: Ceylon, CP 3209 K!

*Liparis serraeformis* auct., non Lindl.: Lindley, Gen. & Sp. Orch. 1830: 32 p.p. (only the Ceylonese specimens).

*Sarcochilus serraeformis* auct., non (Lindl.) Rchb.f.: Reichenbach f., in Walp. Ann. 6: 498, 1861, p.p.; Trimen 1885: 89.

*Dendrocolla serraeformis* auct. non (Lindl.) Lindl. ex Thw.: Thwaites 1861: 303 p.p.

*Thrixspermum serraeformis* auct. non (Lindl.) Rchb.f.: Reichenbach f., Xenia Orch. 2: 121, 1867 p.p.

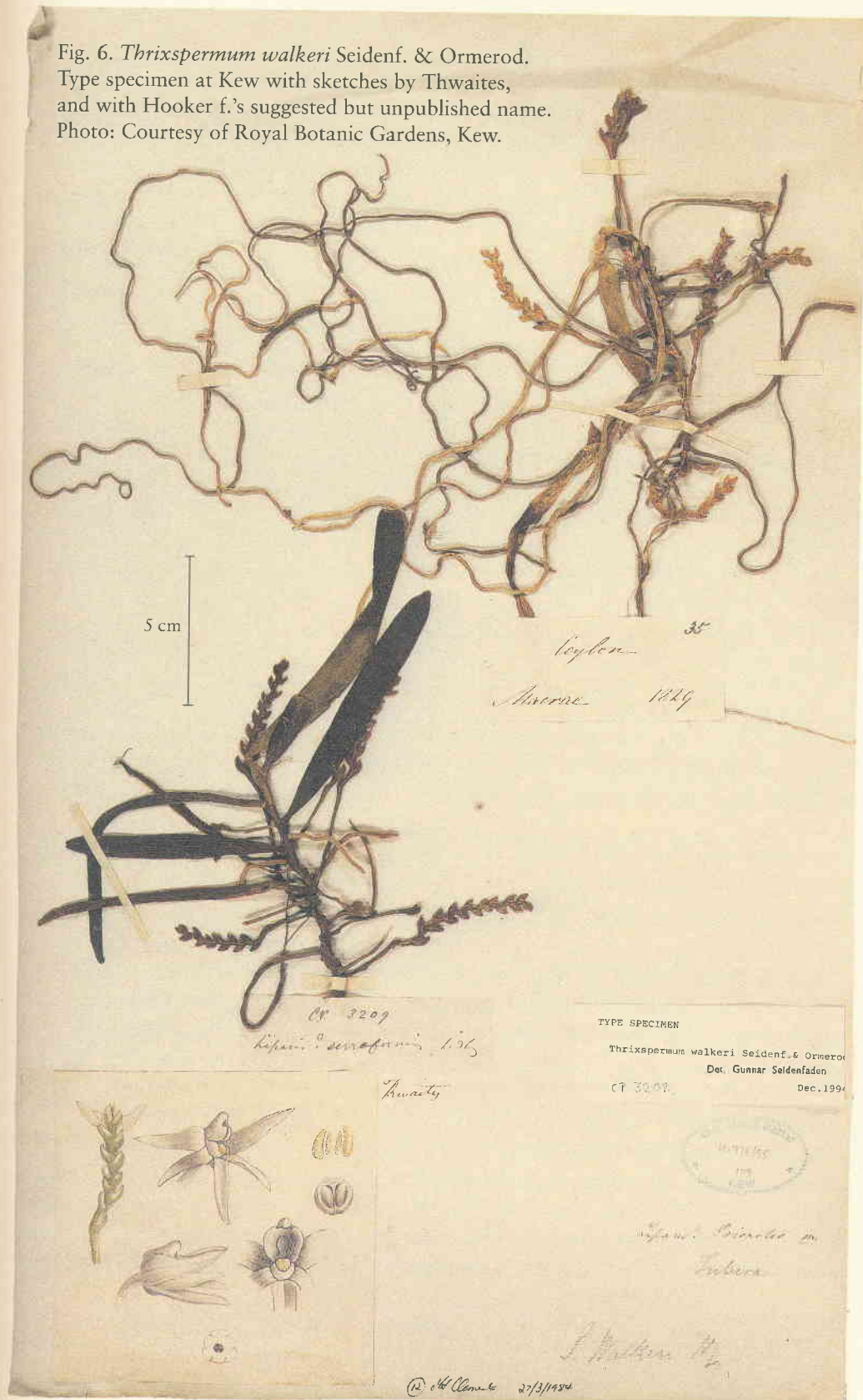
*Sarcochilus complanatus* auct. non (Koen.) Hk.f.; – Hooker f., Fl. Brit. Ind. 6: 41, 1890 p.p.

*Thrixspermum complanatum* auct. non (Koen.) Schltr.: Schlechter 1911a: 55, p.p.; Alston, in Trimen 1931: 277; Jayaweera 1981: 195; Sathish Kumar & Manilal 1994: 61.

*Thrixspermum arachnites* auct., non (Bl.) Rchb.f. Abraham & Vatsala 1981: 458.

Distribution: Ceylon, and a single collection from southern Deccan (Marantody, Wynad).

Fig. 6. *Thrixspermum walkeri* Seidenf. & Ormerod.  
Type specimen at Kew with sketches by Thwaites,  
and with Hooker f.'s suggested but unpublished name.  
Photo: Courtesy of Royal Botanic Gardens, Kew.





As syntypes of *Liparis serraeformis* Lindl. we must consider the specimens listed in Wall. Cat. no. 1946, both of which are Burmese plants referable to *Thrixspermum centipeda*. As type of *Thrixspermum walkeri* we consider the plant CP. 3209 in Kew on which Hooker f. wrote "*S. walkeri*" and on which is also added the fine drawings which Hooker f. received from Peradenya, probably made by Thwaites or one of his artists. It may be added that the same sheet also carry the name "*Liparis? prionotis mihi*" in Lindley's hand, a taxon he never published. See Fig. 6.

## No. 10. *Epidendrum clavatum*

### *Thrixspermum clavatum* (Koen.) Garay

Bot. Mus. Leaflet. Harv. Univ. 23(7): 207, 1972.

*Epidendrum clavatum* Koen., in Retz. Obs. 6: 50, 1791.

*Limodorum clavatum* (Koen.) Willd. Sp. Pl. 4: 126, 1805.

*Saccolabium? clavatum* (Koen.) Lindl., Gen. & Sp. Orch. 1833. – Hooker f. 1890: 66;

Ridley, in Rendle 1933: 186.

Type: Thailand, Phuket, (König LIV (HR 32!)).

*Dendrocolla maculata* Ridl., J. Linn. Soc. 32: 381, 1896, syn. nov.; Ridley 1900: 162; 1907: 186; 1924: 188.

*Thrixspermum ridleyanum* Schltr., Orchis 5: 57, 1911. – Holttum 1953: 607; Seidenfaden 1988: 161, Fig. 98; Seidenfaden & Wood 1992: 651, Fig. 295 c-g.

Type: Singapore, Bukit Mandai (Ridley s.n. K!).

*Thrixspermum ciliatum* Schltr., Bull. Herb. Bois. 2.s. 6: 469, 1906, syn. nov. – Schlechter 1934: Pl. 37, 266; J.J. Smith 1933: 353.

Type: Sumatra, Sungei Lalah, Indragira (Schlechter 13285).

*Thrixspermum infractum* Schltr. Bull. Herb. Bois. 2.s. 6: 470, 1906, syn. nov. – Schlechter 1934: Pl. 68, 272; Wood & Cribb 1994: 341.

Type: Borneo, Bangermassin, Kalimantan (Schltr. 13324).

*Thrixspermum rubrocallosum* Carr, Gard. Bull. Str. Settlm. 5: 37, Pl. 16, 1929. syn. nov. – Holttum 1953: 606; Seidenfaden & Smitinand 1963: 527, Fig. 389; Seidenfaden 1986a: 177.

Type: Tembeling, Peninsular Malaysia (Carr 53 K!).

Distribution: Thailand, Peninsular Malaysia, Sumatra, Borneo.

König's taxon was by Willdenow transferred to *Limodorum* and by Lindley to *Saccolabium* (with questionmark) in which he was followed by Hooker f. and

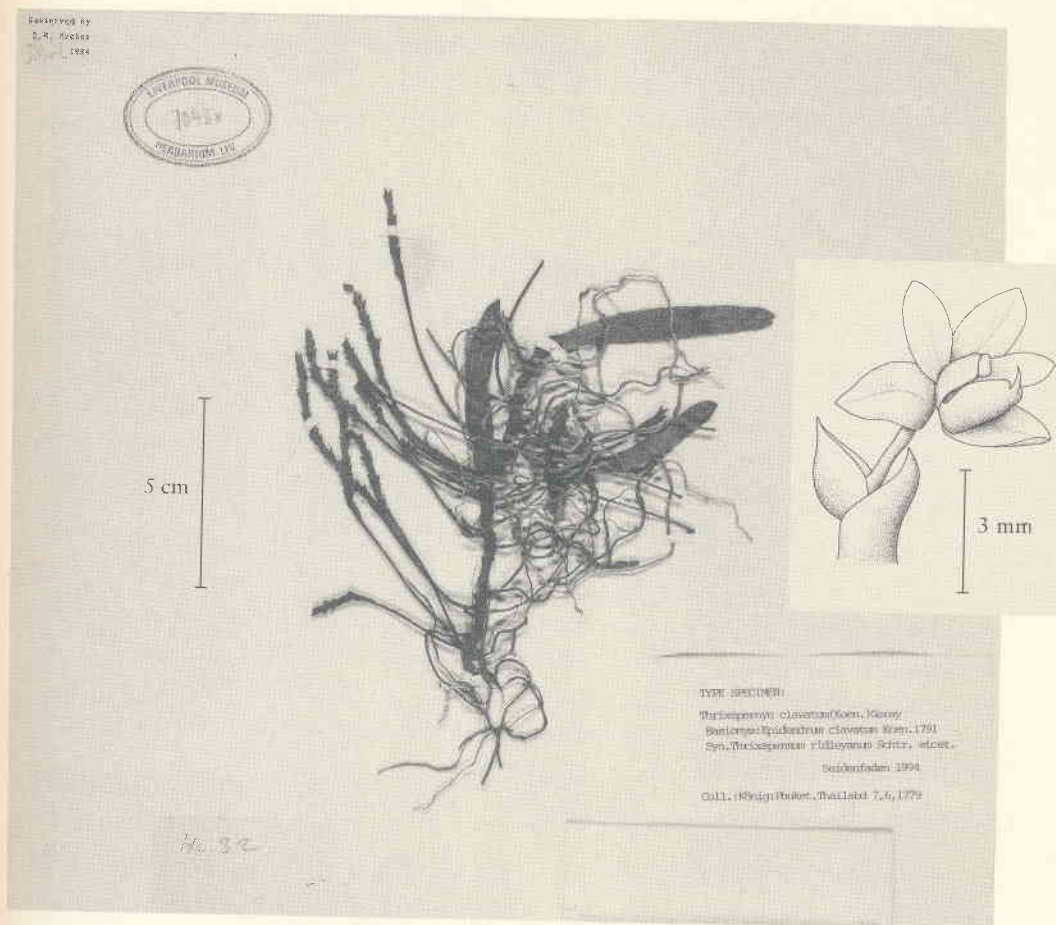


Fig. 7. *Thrixspermum clavatum* (Koen.) Garay. Type specimen at LIV of no. 10. *Epidendrum clavatum* Koen. I have added a sketch of a flower.

Ridley in Rendle 1933: 186, while Garay placed it in *Thrixspermum*. I believe only Garay studied König's description.

Ormerod's careful analysis has convincingly demonstrated that König's description fits with the plant we in Thailand have called *Thrixspermum ridleyanum* (Schlechter's name for *Dendrocolla maculata*). Ormerod also finds that *T. ciliatum* and *T. infractum* must be considered conspecific. König's name has priority.

In Liverpool is a specimen without label, only marked HR32 indicating that it belongs in the part of Rottler's herbarium removed by Royle. The dissection of a single flower could demonstrate that it is identical with *Thrixspermum ridleyanum*. I have no doubt that we here have a König specimen (there are no *Dendrocolla* in Rottler's collection area) and that it can be considered type specimen of *Epidendrum clavatum* Koen. See Fig. 7.

According to the manuscript copy sent by König to Linné the description of *Epidendrum clavatum* was made on 7 June 1779, like those of nos 8 and 9 treated above, and we thus know that the plant was collected near Phuket town.

## No. 11. *Epidendrum subulatum*

### *Papilionanthe subulata* (Willd.) Garay

Bot. Mus. Leaflet. Harv. Univ. 23(10): 372, 1974 (excl. syn. *Aerides cylindrica*).

*Epidendrum subulatum* Koen., in Retz. Obs. 6: 50, 1791, nom. illeg.

*Limodorum subulatum* Willd., Sp. Pl. 4: 126, 1805.

*Aerides subulata* ("Retz.") Schltr., Fed. Repert. 19: 382, 1924, excl. syn. *A. cylindrica* nom. illeg. (not Lindley 1833, which is *Thrixspermum subulatum* (Bl.) Rehb.f.).

Type: Thailand, Phuket, König, 9 June 1779, material not located.

*Dendrobium teres* Roxb., Fl. Ind. 3: 485, 1832 syn. nov.

*Vanda teres* Lindl., Gen. & Sp. Orch. 1833: 217 syn. nov.

*Papilionanthe teres* (Roxb.) Schltr., Orchis 9: 78, 1915.

Type: Roxburgh's type is a collection from Chittagong by J. Roxburgh. Drawing by Roxburgh no. 2355 K, see Fig. 8. Lindley's type is Wall. Cat. 7324, a collection from Sylhet by DeSilva and another by Nees, no locality given.

Distribution: Himalaya, NE India, Andamans, Burma, Thailand, Indochina, China.

Our contention is that König's plant is conspecific with what we hitherto have called *Papilionanthe teres*. This fits with König's description, but naturally we are influenced by the fact that that species is the only *Papilionanthe* found in the area; König's collection was made near Phuket harbour. The idea to place a popular well-known plant in synonymy of a pretty unknown entity will hardly be met with enthusiasm among orchidologists etc., and some students may wish to disregard it, considering that we have not yet found a König specimen in the herbaria. Also the fact that the entity has considerable commercial and hybridization interest may induce an attempt to species-name conservation.

As I see the situation, Lindley made an error when he — albeit with questionmark — included *Epidendrum subulatum* in his synonymy under *Aerides cylindrica* which was based on Deccan plants. König's plant was collected in Thailand, but probably Lindley believed it to be from India, and *A. cylindrica* the most likely place for it. Hooker f. accepted Lindley's synonymy without questionmarks. Schlechter's change of name is a simple recognition of the priority of König's epithet. Garay followed Schlechter when transferring the plant to *Papilionanthe*. This whole development was strictly nomenclatural without taxonomical considerations. Following my proposal that *Epiden-*



Fig. 8. *Papilionanthe subulata* (Koen.) Garay. Roxburgh's drawing no. 2355 at Kew which must be considered type of *Dendrobium? teres* Roxb. This drawing is not up to Roxburgh's usual excellent standard; perhaps the sketch was made by the collector at the time of collection. Anyway I believe we are bound to consider it the type specimen unless material is located. Photo: Courtesy of Royal Botanic Gardens, Kew.



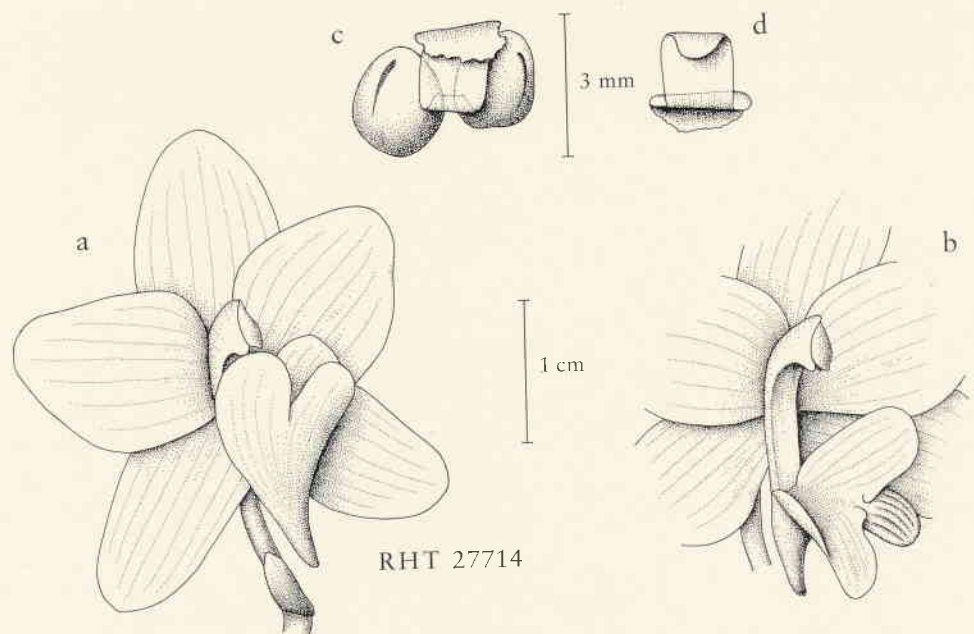


Fig. 9. *Papilionanthe cylindrica* (Lindl.) Seidenf. Sketches after a plant in Rapinat Herbarium. a. flower, b. central part of flower, c. pollinarium, d. stipes.

*drum subulatum* is conspecific with *Vanda teres* the characters separating this from *Aerides cylindrica* are very distinct, especially in the midlobe of the lip; compare the many published illustrations of the two entities, see also Figs 8 and 9. Accordingly, we must return to Lindley's specific epithet, transferring the plant to *Papilionanthe*, cf. below.

The nomenclatural situation around *Vanda teres* is somewhat blurred. When Lindley established his *Vanda teres* in 1833 his type was Wall. Cat. 7324 from Sylhet, he mentions in synonymy a *Dendrobium teres* Wall. Mss., which is a nom. nud. He later added records eastwards from Sylhet, but never mentioned Roxburgh's taxon. This was based on a Chittagong collection 1810, listed as a nom. nud. in Hort. Beng. 1814, validated by the description in 1832 and with Sylhet added in the distribution. I believe it was Hooker f. who first published that Roxburgh's and Lindley's plants were identical. Implicitly that would mean that Hooker f. transferred Roxburgh's *Dendrobium* to *Vanda*, but he realized that the name *Vanda teres* in the meantime had been used by Lindley for an identical plant, and he must have accepted Wall. Cat. 7324 as type specimen. The authorship "(Roxb.) Lindl." is obviously incorrect; Lindley never made such a transfer, while on the other hand the inclusion of "(Roxb.)" in the authorship for *Papilionanthe teres* is an indication that Schlechter considered Roxburgh's name his basionym with the Chittagong plant as type specimen.

***Papilionanthe cylindrica* (Lindl.) Seidenfaden comb. nov.**

*Basionym:* *Aerides cylindrica* Lindl. Gen. & Sp. Orch. 1833: 240, excl. syn. – Wight 1852: 19, T.1744; Lindley 1859: 41 p.p.; Thwaites 1864: 206, Gard. Chron. 1875(1): 537; 1886(1): 405, Fig. 81; Hooker f. 1890: 44 & 196 (excl. syn. *Epidendrum subulatum* and *Limodorum subulatum* but including “*Cymbidium elegans* Herb. Heyne”); Trimen 1898: 189; Fischer, in Gamble 1928: 1442; Fyson 1932: 580, T.506; Saldanha & Nicolson 1976: 812; Abraham & Vatsala 1981: 444, Fig. 131.

*Papilionanthe subulata* auct. non (Willd.) Garay: Pradhan 1979: 563; Jayaweera 1981: 202, Fig. 90; Matthew 1982: Fig. 715; Seidenfaden, in Matthew 1983: 1576; Joseph 1987: 108, Fig. 54, Sathish Kumar & Manilal 1994: 19 & 82, colourphoto, 53.

*Type:* Lindley cites Wall. Cat. no. 7317, which has two collections: a) *Cymbidium cylindricum*, Chittagong, which is Heyne's collection from Coorg, and b) Herb. Wight which is illustrated by Wight (1851: Pl. 1744) from Coimbatore. I would chose Heyne's plant as lectotype.

*Distribution:* Ceylon and Deccan.

There is a fine specimen of Heyne's collection at Kew, and Hooker f. has made some drawings on the sheet. In Fig. 9 I have made some sketches after a specimen in the Rabinat Herbarium (RHT 27714).

Schlechter's inclusion of *Aerides cylindrica* under his *A. subulata* was not noted by some authors who continued to list *A. cylindrica* as a separate species. Later authors list *Papilionanthe subulata* and it will be understood that this I consider a misidentification, reserving the name *P. subulata* for the plant we usually have called *Vanda teres*. As indicated in the bibliography above I believe all these Deccan plants must be referred to *P. cylindrica* and believe *P. subulata* not to occur in Deccan. There may, however, be exceptions, recently Ansari & Dwarakan (1992) recorded under the name *P. teres* a collection from Tamil Nadu, and their small figures with a bilobulate midlobe of the lip show that it cannot be *P. cylindrica*. The isolated occurrence in Tamil Nadu of *P. subulata* is very surprising. The nearest record I know of is Lushington's collection from Vishachapatam, Orissa, at about 18°N lat., this plant is at Kew.

**No. 12. *Epidendrum nudum***

***Dendrobium pachyphyllum* (Kze.) Bakhuizen**

in Bakhuizen & Koster, Blumea 12(1): 69, 1963. – For bibliography and synonyms, see e.g. Seidenfaden 1985: 10.

*Epidendrum nudum* Koen., in Retz. Obs. 6: 52, 1791.

*Dendrobium pumilum* Roxb., Fl. Ind. 3: 479, 1832. – Ridley, in Rendle 1933: 186

*Type:* Java, Nusa Kambonga, Blume s.n. BO.



*Distribution:* India, Bangladesh, Burma, Thailand, Indochina, Peninsular Malaysia, Indonesia.

König's description is somewhat cryptic. He has a shorter description in the *Voyage* (1894: 69) and there are some rough but important sketches in the manuscript in the Linnean Society. There is no doubt about the identification. Ridley's suggestion was correct, but he used an older name.

König's name has priority, but is unavailable in *Dendrobium* on account of Lindley's use of the name for a Javanese species. König found and named it on 12 June 1779 near Phuket, the species is very common in Peninsular Thailand. We have not yet located a herbarium specimen.

### No. 13. *Epidendrum tomentosum*

#### *Eria tomentosa* (Koen.) Hk.f.

Fl.Brit.Ind. 5: 803 & 6: 198, 1890. – For bibliography and synonyms, see e.g. Seidenfaden 1982: 57, 1992: 175.

*Epidendrum tomentosum* Koen., in Retz. Obs. 6: 53, 1791.

*Type:* Thailand: Lalang Island E of Phuket. König, 20 June 1779, K! LIV (HR 22!).

*Distribution:* NE India, Burma, Thailand, Indochina.

There are good specimens of this in Herb. Rottl. in Kew (see Fig. 10) and in Liverpool.

Ridley (in Rendle 1933: 186) wrongly suggested that this may be *Eria albidotomentosa*.

### No. 14. *Epidendrum bidentatum*

#### *Polystachya concreta* (Jacq.) Garay & Sweet

Orchideologia 9(3): 200 ff., 1974, q.v. for bibliography and synonyms, see also e.g. Seidenfaden 1988: 17, fig. 1.

*Epidendrum concretum* Jacq. Enum. Syst. Pl. 30, 1760.

*Epidendrum bidentatum* Koen., in Retz. Obs. 6: 554, 1791, syn. nov.

*Limodorum bidentatum* (Koen.) Willd., Sp. Pl. 4: 124, 1805. – Hooker f. 1890: 197.

*Dendrobium parvum* Seidenf., Op. Bot. 124: 30, 1995, syn. nov.

*Type:* Martinique (Jacquin)

*Distribution:* Pantropical; in Asia widespread from Ceylon, Deccan and NE India eastwards to the Philippines and south to Indonesia.

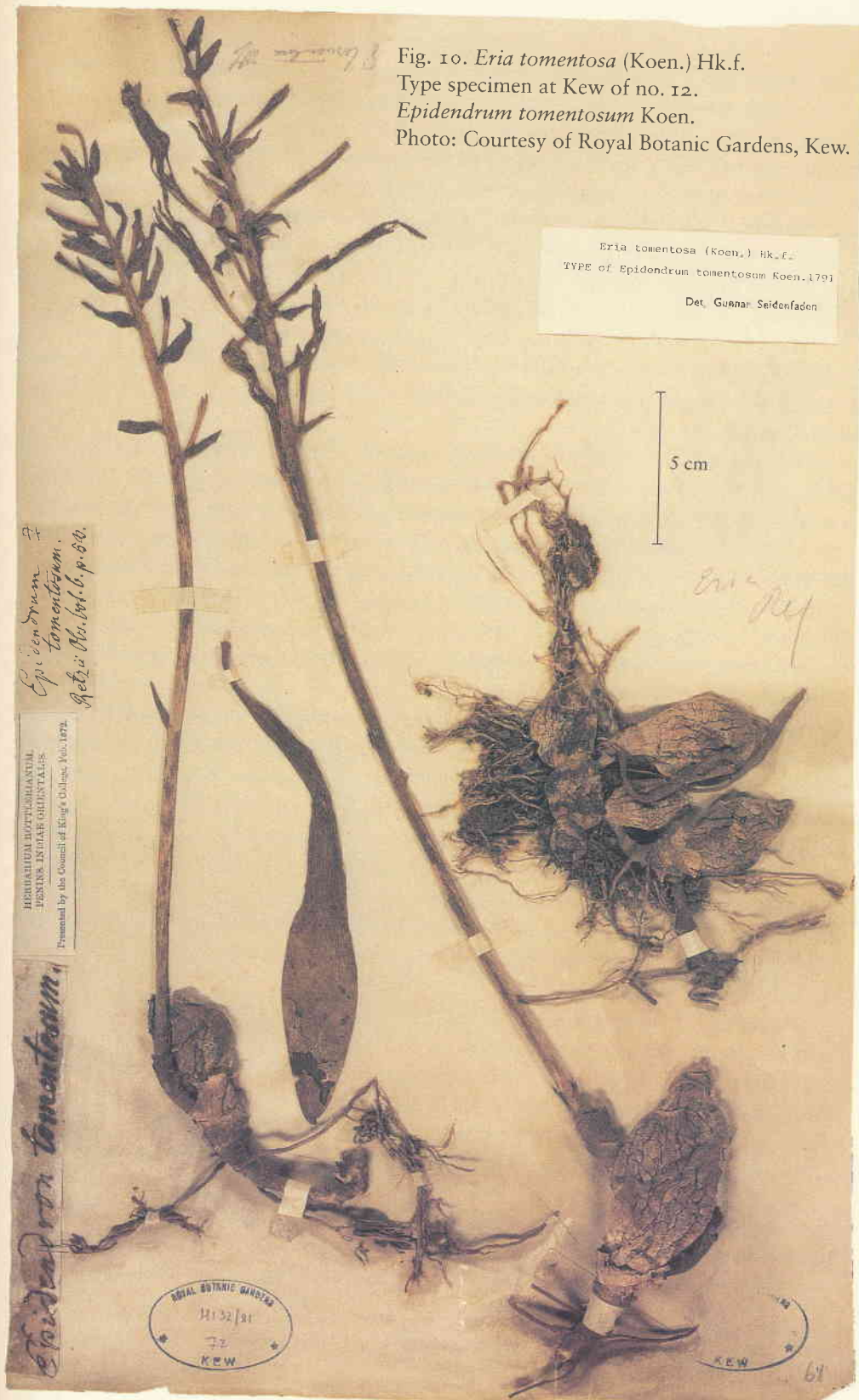


Fig. 10. *Eria tomentosa* (Koen.) Hk.f.  
Type specimen at Kew of no. 12.  
*Epidendrum tomentosum* Koen.  
Photo: Courtesy of Royal Botanic Gardens, Kew.

*Eria tomentosa* (Koen.) Hk.f.  
TYPE of *Epidendrum tomentosum* Koen. 1791  
Det. Gunnar Seidenfaden

5 cm

*Epidendrum tomentosum.*  
Petri Phil. bot. b. p. 60.

HERBARIUM BOTANICUM  
PENINS. INDIAE ORIENTALIS  
Presented by the Council of King's College, Feb. 1872.

*Epidendrum tomentosum.*

ROYAL BOTANIC GARDENS  
11132/21  
72  
KEW

KEW 61

Despite the long, detailed description by König, this is perhaps that of his entities which for the longest time resisted our attempt to identification. Lindley placed it among the plants for which he had to give up a proposal for the proper genus, while Ridley (1923: 187) suggested it might belong to *Cleisostoma*. For some time we centered our search in the Aeridinae-subtribe, trying out the possibility that it might be *Ascocentrum miniatum*, but gave up this idea, e.g. because König says that the inflorescence sometimes is branched, and stated that the operculum is white. (Furthermore *A. miniatum* hardly occurs in the Malacca area, from which we believe König obtained his plant.)

That Ormerod's inspiration that the plant must be *Polystachya concreta* came late is by hindsight understandable; that species is a pretty nondescript entity without any outstanding striking specific characters leading towards an easy identification.

The identity of *Epidendrum concretum*, described in 1760 by Jacquin on the basis of a plant from Martinique was clarified as late as 1974 by Garay & Sweet, and the situation they had before them is rather similar to the one we met with in *Epidendrum bidentatum*. They had no plant material and relied alone on Jacquin's description. This was supplied in a classical Latin which had to be translated into our botanical Latin and modern vocabulary, only then could they build up an 'image' demonstrating the conspecificity with a long series of taxa. König's vocabulary, only 15-20 years later, is similarly in a classical Latin needing a translation.

Ormerod's study, sentence for sentence, of König's text leaves no doubt that König's *Epidendrum bidentatum* is identical with *Epidendrum concretum* Jacq. We get the image of a plant with 3-5 leaves, 7-10 by 1 cm, the sheaths enclapsing each other basally. The inflorescence is simple or 2-3 branched, the flower is yellow or partly so, occasionally paler, the column and anther cap white. Lateral sepals obliquely ovate, erect, glabrous, petals lanceolate, dorsal sepal broadly ovate, all of equal length. The lip of same length, rounded. Of importance is that König clearly describes the existence of a columnfoot: 'Apex inferior descendens corniculatus, robustus, germine brevior'.\*

Recently (Seidenfaden 1995: 30) I proposed the establishment of a new species, *Dendrobium parvum* based on some rather unsatisfactory Thai material received from Maxwell. Without hesitation, both Ormerod (pers. comm.) and Garay (pers. comm.) rightly informed me that here I had committed a blunder, the material clearly represents *Polystachya concreta*, so it is added above to the very long series of synonyms, which now exceeds some 60 taxa.

\* During a visit to Kew after the printing was started in November 1995 Ormerod located in the Indian *Polystachya* file an otherwise unlabelled sheet from the Rottlerian Herbarium, which we suggest must be a König collection, confirming the identification.



## No. 15. *Epidendrum lycopodioides*

### *Oberonia lycopodioides* (Koen.) Ormerod

in Seidenfaden, Op. Bot. 124: 22, 1995.

*Epidendrum lycopodioides* Koen., in Retz. Obs. 6: 55, 1791.

*Cymbidium lycopodioides* (Koen.) Willd., Sp. Pl. 4: 98, 1805. – Blume 1825: 394.

*Oberonia anceps* Lindl., Sert. Orch. sub T.8, 1838. – Seidenfaden 1968: 63; 1978: 24; 1992: 155; Seidenfaden & Wood 1992: 247; see further bibliography and many synonyms in the above cited papers.

Type: Malacca, König, 5 Sept. 1779, K!, LIV (HR 54!).

Distribution: From Burma eastwards to the Philippines and south to Indonesia.

Study of the comprehensive description by König convinced Ormerod that the widespread plant described by Lindley as *Oberonia anceps* is conspecific, and with the find of type material this identification can be confirmed, see Fig. 11. Already Blume referred König's plant for which he used the name *Cymbidium lycopodioides* Willd. to his section *Ensifera* of *Malaxis* which is now referred to *Oberonia*. This was overlooked by Lindley and as far as I know by all later authors except Ridley (in Rendle 1933: 186) and overlooked by Ormerod; Ridley only informally suggested this and did not undertake a transfer.

Both the specimens in Kew and in Liverpool have been labelled *Cymbidium equitans* by later students, this I believe to be the name of a Pacific plant used by Swartz, now known as *Oberonia equitans* (Forst.) Mutel.

## No. 16. *Epidendrum longiflorum*

### *Bulbophyllum vaginatum* (Lindl.) Rchb.f.

Walp. Ann, 6: 261, 1861. – For bibliography and synonyms, see e.g. Seidenfaden 1973: 41 (excl. syn. *Cirrhopetalum whiteanum* Rolfe); Comber 1990: 278; Seidenfaden & Wood 1992: 439; Wood & Cribb 1994: 314; Garay et al. 1994: 634.

*Cirrhopetalum vaginatum* Lindl., Gen. & Sp. 1830: 59.

Type: Singapore Wall. Cat. 1979.

*Epidendrum longiflorum* Koen., in Retz. Obs. 6: 55, 1791, nom. illeg.

Type: Probably Malacca, König s.n. K! LIV (HR 23!).

*Cirrhopetalum caudatum* Wight. Ic. Pl. 5: T.1658, 1851.

Type: Malacca, Griffith.



Fig. 11. *Oberonia lycopodioides* (Koen.) Ormerod.  
Type specimen at Kew of *Epidendrum lycopodioides* Koen.



*Cirrhopetalum stramineum* Teijsm. & Binnend., Nat. Tijds. Ned. Ind. 24: 310, 1862.

Type: Palembang, Teijsmann.

Distribution: Peninsular Thailand, Peninsular Malaysia, Singapore, Sumatra, Bangka, Malaku, Borneo.

Study of König's description leads Ormerod to suggest that this is *Bulbophyllum vaginatum*, and I believe this may be verified by herbarium specimens. In Kew there is a collection from Rottler's herbarium labelled *Epidendrum longiflorum* with reference to König's description in the BM Mss. ("B page 52") and the publication in Retz. Obs. 6: 56, the specimen is without inflorescence, but in LIV there is an identical specimen with a withered somewhat miserable inflorescence and I am pretty certain on the identification: all the characters fit.

König's specific epithet is not available due to an earlier homonym in *Bulbophyllum*, the present valid name must be *Bulbophyllum vaginatum*.

Ridley (in Rendle 1933: 186) proposes this could be *Cirrhopetalum papillosum* Rolfe, that taxon, today called *Bulbophyllum thaiorum* J.J. Sm., is a rare species found in Upper Burma and N. Thailand, so he can hardly be correct.

I have not yet in the available sources found indications of the date of König's collection or the locality, most likely he found it during his stay at Malacca.

On the label of the specimen at K is a reference "Rheede Pl. Malabar 12.T.23" This must be considered an error, on Rheede's plant see Manilal & Sathish Kumar (1991: 52 ff.), who call it *Bulbophyllum rheedei*.

## No. 17. *Epidendrum flabellum veneris*

*Cirrhopetalum flabelloveners* (Koen.) Seidenf. & Ormerod comb. nov.

Basionym: *Epidendrum flabellum veneris* Koen., in Retz. Obs. 6: 57, 1791.

Type: Probably Malacca, König. So far no material found.

*Ephippium lepidum* Bl., Bijdr. 1825: 310, syn. nov.

*Bulbophyllum lepidum* (Bl.) J.J. Sm. Fl. Buitz. 6: 471, 1905. – For bibliography and synonyms, see e.g. Seidenfaden 1973: 43; 1979: 157; 1992: 279; Comber 1990: 280; Seidenfaden & Wood 1992: 441; Wood & Cribb 1994: 297.

*Cirrhopetalum lepidum* (Bl.) Schltr. Fed. Repert. 10: 185, 1911. – Garay et al. 1994: 618.

Distribution: From Andamans and Burma eastwards to Indochina, south through Thailand and Peninsular Malaysia to Indonesia.

Like no. 16 above, this is a *Cirrhopetalum* as this genus is understood by Garay et al., and König's long, careful description leads us to *Cirrhopetalum*

*lepidum* (Bl.) Schltr., this species is very common in Thailand and Peninsular Malaysia.

If our identification can be verified through identification of a specimen, we are bound to consider the nomenclatural consequences. It is our understanding that König's specific epithet cannot be rejected, but must be united or hyphenated and we believe the above *C. flabellovenensis* (Bl.) Seidenf. & Ormerod is the valid name to supplant *Ephippium lepidum* Bl. and its derivatives. Our proposal above may by some students be considered premature as long as we have not seen herbarium material, furthermore we will here have another example where the lack of interest through 200 years for König's publication leads to a situation which will be met with displeasure by scientists and horticulturalists alike, who see a well-known and widespread name as victim of the priority rules. Only the cumbersome road through specific name conservation will then be available.

Ridley (in Rendle 1933: 186) suggests this may be *Cirrhopetalum miniatum* Rolfe a plant I recently (1992: 278) considered conspecific with *Bulbophyllum pectenvenensis* (Gagnep.) Seidenf., but which Garay et al. (1994: 626) believe to be a separate species, calling it *Bulbophyllum tingabarinum*. This is an Annamese plant and Ridley could hardly be correct.

## No. 18. *Epidendrum Flos aeris vel saaronicum*

### *Dendrobium crumenatum* Sw.

Schrad. J. Bot. 2: 237, 1799. – For bibliography and synonymy see e.g. Seidenfaden 1985: 200; 1992: 248; Seidenfaden & Wood 1992: 409; Wood & Cribb 1994: 245.

*Epidendrum saaronicum* Koen., in Retz. Obs. 6: 58, 1791.

*Aerides matutina* Willd., Sp. Pl. 4: 130, 1805. nom. illeg.

*Epidendrum matutinum* (Willd.) Poir, Encycl. Meth. Bot., Suppl. 1: 384, 1810.

Type: "Ind. orient."

Distribution: Ceylon (cult.?), India (cult.?), Burma, Thailand, Indochina, China, Malaysia, Indonesia.

There seems no doubt that Ormerod is correct when he on the basis of König's description identifies this as being the well-known *Dendrobium crumenatum* Sw.

König here has two alternate names, but we may disregard the name *E. Flos aeris* (the present *Arachnis flosaeris* (L.) Rchb.f.), which is completely different from the plant described by König, for the same reason we must consider it an error when Hooker f. (1890: 197) suggests that König's plant is *Renanthera arachnites* (Sw.) Lindl., another name for *Arachnis flosaeris*. We need therefore only to deal with *Epidendrum saaronicum* (cf. ICBN Tokyo Art. 34, 2).

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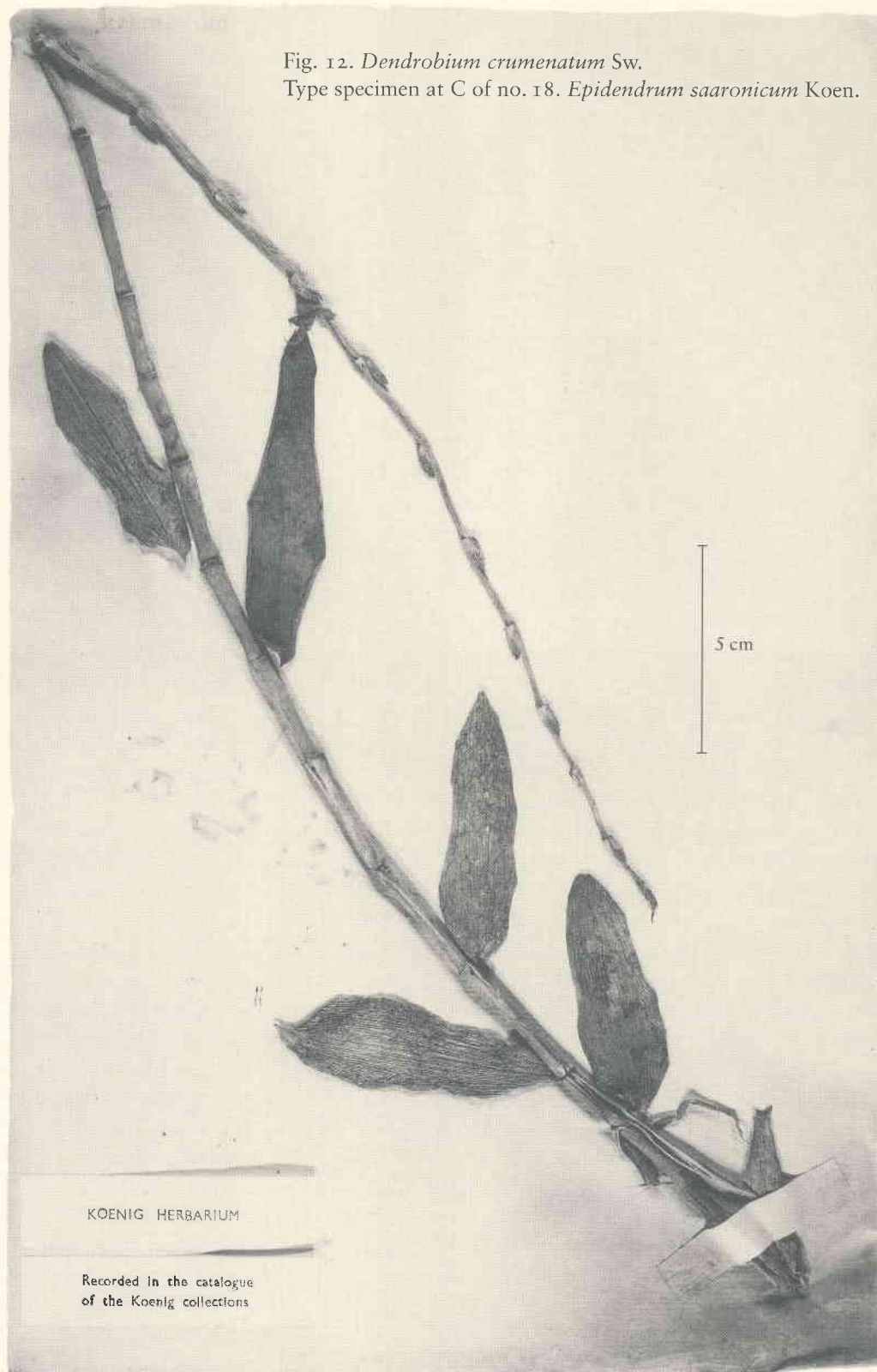
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Fig. 12. *Dendrobium crumenatum* Sw.  
Type specimen at C of no. 18. *Epidendrum saaronicum* Koen.





Willdenow's *Aerides matutina* has *Epidendrum flos aeris vel saaronicum* as basionym. It is illegitimate because when he transferred it to *Aerides* he should have used the specific epithet *saaronicum*. It is also superfluous whether we accept *D. crumenatum* or another older name. Willdenow's illegitimate epithet however invalidates *Aerides matutina* Bl. 1825, but does not invalidate Lindley's when in 1833 he transferred this species to *Renanthera*, only we have to exclude the "(Blume)" from the authorship (cf. ICBN Tokyo Art. 58, 3), this has been overlooked by recent authors. It may be noted that Lindley's later use of *Renanthera matutina* (Bot. Reg. 29: T.41, 1843, and Bot. Reg. 33: sub T.26) is a misidentification, the plant here being *Renanthera elongata* (Bl.) Lindl. Likewise *R. matutina* sensu Guillaumin (1930: 337) is a misidentification, the plant is *Renanthera isosepala* Holtt.

When accepting Swartz's name from 1799 and placing *Epidendrum saaronicum* 1771 in synonymy I am well aware that this is not in accordance with the priority rule. This is due to the uncertainty on the correct name for the widespread species for which we today use Swartz's epithet. Swartz took his specific epithet from Rumphius' *Angraecum crumenatum*. This naturally must be disregarded, Rumphius' name being from before 1753. But there is uncertainty on some taxa published before Swartz's 1799 paper.

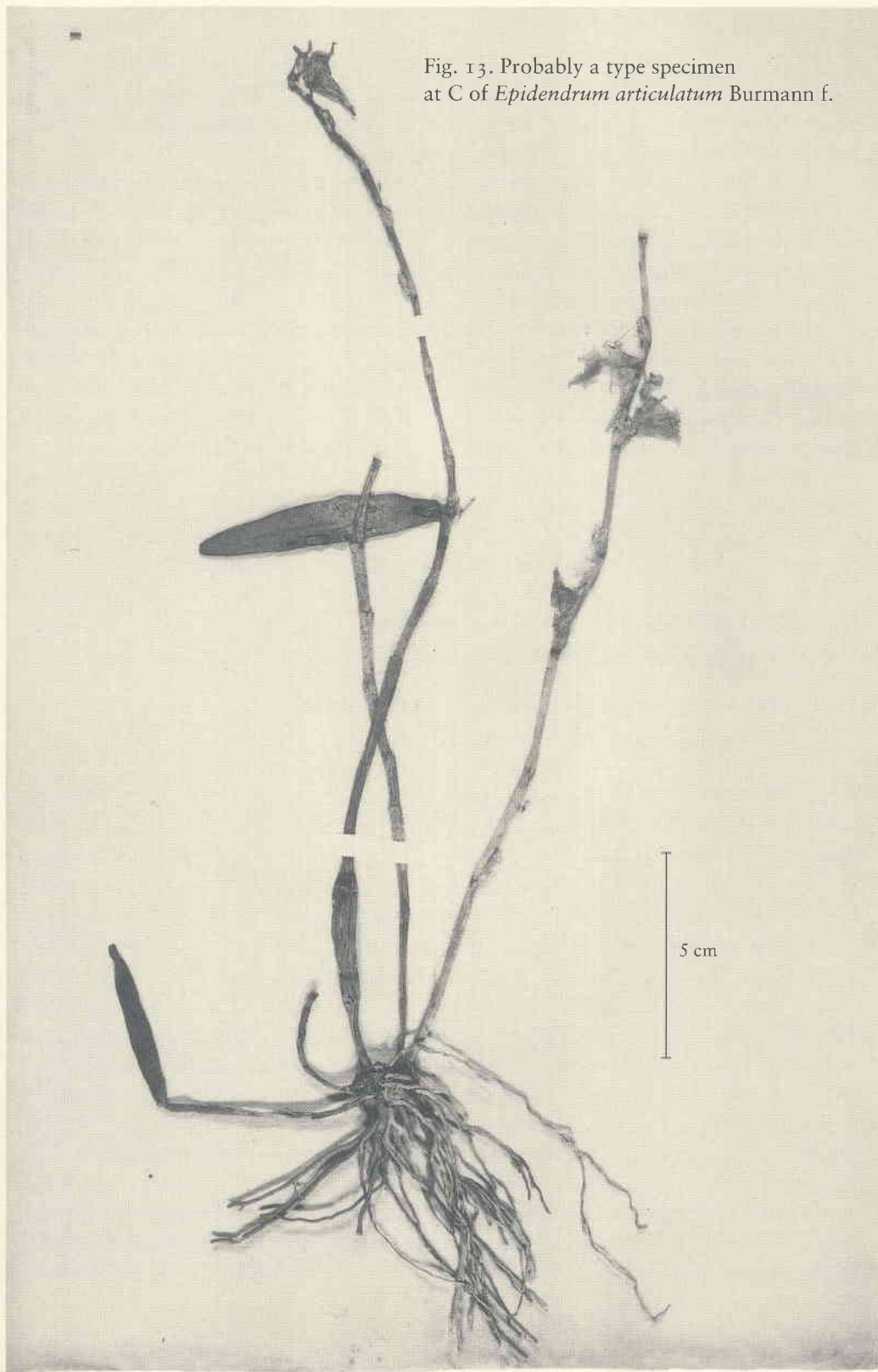
Firstly, it has never been firmly established if the *Cereia simplicissimus* Lour. (1790: 518) is conspecific; I feel there is a high probability that this is the case. There are two sheets of Loureiro's plant in BM. They are without flowers, but by close study it should be possible to settle this question once and for all.

Some other problems were touched upon in an earlier paper (Seidenfaden 1985: 202) and without venturing to go deeper into this matter in this place, one point should be mentioned, where König may be involved.

As stated above (p. 15) we have in Copenhagen a König collection sent by him to Rottbøl. It is not related to *Epidendrum spathulatum* Koen. but it is labelled *Epidendrum spathulatum* probably in Vahl's hand. We have to consider how this name originated, — the plant is *Dendrobium crumenatum*, see Fig. 12. Ormerod suggests that what here was intended was *Epidendrum spathulatum* Burman f. (1768: 188). N.L. Burman (1733-1785) was closely related to Linné whom he visited in 1760 and with whom he had much correspondence, he was a contemporary of König whom he probably met in Uppsala, and most likely König brought along on his travels the *Flora Indica* where Burman used the Linnean nomenclature and tried to find conspecificity with pre-Linnean taxa, — not always successfully — e.g. those dealt with by Rumphius whose Herb. Amb. probably also was included in König's sparse library.

*Epidendrum spathulatum* Burman f. is an illegitimate name due to Linné's earlier homonym. And according to Merrill (1923: 173) it is referable to *Dendrobium crumenatum* and anyway *spathulatum* is not available in *Dendrobium* due to *D. spathulatum* L.O. Williams (1928: 124). The reference to Herb.

Fig. 13. Probably a type specimen  
at C of *Epidendrum articulatum* Burmann f.



Amb. 6: 94, T.44, Fig. 1 covers according to J.J. Smith (in Merrill 1917: 174) a closely related species, *D. papilioniferum* J.J.Sm., so König was not far off from the mark. I suggest that the Copenhagen specimen should be considered type specimen of *Epidendrum saaronicum*.

In Copenhagen we have from Vahl's herbarium two plants he received from Burman f., labelled "*Epidendrum articulatum* Burm.f., Fl. Ind. page 189", they may well be type material. This is one of the taxa for which Merrill (1921a: 348) did not propose a specific epithet, just adding that it is clearly a *Dendrobium* of the section *Aporum*. Our specimen is a *Rhopalanthè* and looks much like a small *Dendrobium crumenatum*, but I have not wanted at present to try to identify it, which would necessitate the dissection of the flowers, but have in Fig. 13 included a photograph of Burman's plant. We can hardly exclude that *Epidendrum articulatum* may be the oldest name for *Dendrobium crumenatum*, older than both Swartz's and Loureiro's.

## No. 19. *Epidendrum plantaginifolium*

### *Phreatia plantaginifolia* (Koen.) Ormerod

in Seidenfaden, Op. Bot. 124: 23, 1995.

*Epidendrum plantaginifolium* Koen., in Retz. Obs. 6: 60, 1791.

*Cymbidium plantaginifolium* (Koen.) Willd., Sp. Pl. 4: 101, 1805.

Type: Malacca, Tsing, König, s.n. Oct. 1779, material not yet located.

*Dendrobium secundum* Bl., Bijdr. 1825: 350.

*Phreatia secunda* (Bl.) Lindl., Gen. & Sp. Orch. 1830: 64.

Type: Java, Pantjar, Blume s.n.

? *Phreatia minutiflora* Lindl., J. Linn. Soc. 3: 62, 1859.

Type: Borneo, Lobb.

Distribution: Thailand, Indochina, Philippines, Malaysia, Indonesia.

While there seems no doubt that *P. plantaginifolia* as proposed by Ormerod is the correct name for what we hitherto have called *P. secunda*, there is still considerable uncertainty about the synonymy and the correctness of the identifications in earlier literature. We are strongly in need of a monograph on the genus, based on herbarium material and fresh collections from the whole distribution area.

Blume's *Dendrobium secundum*, based on one of his Javanese collections, was transferred by Lindley 1830 to *Phreatia*. In 1859 Lindley added two new taxa, *Phreatia minutiflora* based on a Bornean collection by Lobb, and *P. mi-*

*crotidis* based on a Javanese collection, likewise by Lobb, both of these are present in Lindley's herbarium at Kew. He did not at that time discuss the relationship of these two taxa to *P. secunda*.

J.J. Smith (1905: 500) placed *P. microtidis* as conspecific with *P. secunda*.

Ridley (1907: 107) identified plants from Peninsular Malaysia to be *P. minutiflora*, with no mention of *P. secunda*; later (1924: 106) he added *P. microtidis* to the Malayan flora, disregarding J.J. Smith's position on the conspecificity with *P. secunda*. In his Sumatran enumeration J.J. Smith (1933: 347) added *P. minutiflora* in the synonymy under *P. secunda* following Ames (1925: 316), this position was agreed to by Holttum (1953: 549) and later authors, who mostly also included *P. microtidis* in the synonymy.

After study of herbarium material Ormerod has reached the conclusion that while there may still be some uncertainty about the conspecificity of *P. minutiflora*, it is hardly correct to include *P. microtidis* in the synonymy under *P. plantaginifolia* as has been done by several authors following J.J. Smith. As separating characters he points at the inflorescence, where the rachis is thick angulose, subdensely many-flowered. The floral bracts are ovate-broad triangular, acute, shorter than the pedicellate ovary. Ormerod considers the photograph supplied by Comber (1990: 206) under the name *P. secunda* to represent *P. microtidis*. During his studies in BM Ormerod located an isotype specimen of *P. secunda*, and also material of this from Malaya, Sumatra and Borneo.

## No. 20. *Epidendrum sessile*

### *Bulbophyllum clandestinum* Lindl.

Bot. Reg. 27, misc. 77, 1841. – Hooker f. 1890: 753 (p.p. ?).

*Epidendrum sessile* Koen., in Retz. Obs. 6: 60, 1791, nom. illeg. – Willdenow 1805: 115.

*Bulbophyllum sessile* J.J. Smith., Fl. Buitz. 6: 448, 1905. – Seidenfaden 1979: 38; Comber 1990: 258; Seidenfaden & Wood 1992: 503; Wood & Cribb 1994: 310.

Type: Burma, Mergui, Griffith.

Distribution: Probably widespread from Andamans and Burma eastwards to Vietnam and the Philippines, south through Thailand and Peninsular Malaysia to Indonesia and possibly to New Guinea and the Pacific, cf. below.

König's name is illegitimate due to the earlier homonym by Swartz 1788 for a plant from Jamaica. Hooker f. studied König's type in Kew (Herb. Rottl.) and found it conspecific with *Bulbophyllum clandestinum*. J.J. Smith's use of König's specific epithet, accepted by later authors, is invalidated by Hooker's finding.



König's specimen was labelled *Epidendrum sessile* König with a reference to Retz. Obs. 6: 60. There is also a specimen at LIV (HR 46!).

I have not yet found any information on the date or of collection place, probably König got it near the town of Malacca.

Dr Garay has kindly warned me about the uncertainty in the synonymy in sect. *Oxysepala*. Already by comparing my figures of the Thai plant (1979: Fig. 18) which I believe to represent König's taxon with the figures supplied by Lewis & Cribb (1991: Fig. 64 L-T) of a plant from the Solomon Islands (Wickison 13A) under the name *B. sessile* it seems obvious that we must consider these to be two different species, e.g. their drawing shows linear petals and a somewhat panduriform lip, quite different from the Thai plant. The authors are aware of the uncertainty, noting that Vermeulen feels that two different species may have been confounded; Garay is of the opinion that Lewis & Cribb's figure represents *B. korinense* J.J. Sm. (1929: 462), a plant from Biak, Schouten Islands, New Guinea (W. Feulletau de Bruyn 459), and J.J. Smith's figures (1929: T.75, Fig. 108) seem to confirm this, they look identical. Garay believes that *B. volkensenii* Schltr. (1914: 11), another Pacific entity, collected at the Palau Island is the same. While these taxa must be separate from König's entity, their name may still be uncertain.

When we get to König's taxon, I believe it is generally agreed that *B. clandestinum* Lindl. must be considered the valid name today. Lindley established this in 1841 on the basis of a Singapore plant collected by Loddiges, he has no reference to König's plant. If he had realized the conspecificity he should have validated König's illegitimate name by transferring it to *Bulbophyllum* or he might have defended his own name by making use of the "Kew Rule". It was Hooker f. (1890: 755) who realized the conspecificity after study of a König plant in the Rottlerian herbarium at Kew. The transfer of König's name to *Bulbophyllum* was not undertaken before 1905 by J.J. Smith, too late to give König's name priority.

Hooker's finding that *B. trisetum* Griff. (1851a: 283), an entity based on his collection in Malacca is the same seems undisputed and may be confirmed by Griffith's figures (1851b: T.293). Likewise, there seems little doubt about the conspecificity of the common Philippine taxon *B. profusum* Ames (Type: Rizal, Luzon, Ramos 13785). That name is used by Valmayor (1984: 121), but Ames (1912: 138) admits that his taxon may show to be conspecific with *B. sessile* (Koen.) J.J. Sm. and also with *B. myrianthum* Schltr., the latter based by Schlechter (1911b: 178) on a plant from Sulawesi. Schlechter's figures (1934: Pl. 60, Fig. 240) seem indistinguishable from our Thai plants. I have myself added *B. bolovenense* Guill. (1957: 500) as synonym, and Ormerod suspects that also *B. sparsifolium* Schltr. should be added to the synonymy.

The most intriguing problem is the position of *Oxysepala ovalifolia* Wight. I believe it was Reichenbach f. who first got the idea to merge this with

*B. clandestinum*, first (1857: 57) when dealing with Zollinger's plants, where he referred Zollinger 3136 from Java to *B. clandestinum*, then a few years later in Walp. Ann. (1861: 248) where he in extenso cites Lindley's and Wight's texts side by side. Evidently Reichenbach did not fully realize the differences between the two descriptions, e.g. Lindley speaks about petals ovatus obtusis, while Wight has petals narrow, linear, and the latter feature can be seen on his illustrations (1851: Pl. 1736), this seems to indicate that Wight's plant must be placed with the "eastern plants" discussed above, and could be the oldest name for these; unfortunately we cannot use Wight's specific epithet for it in *Bulbophyllum* on account of an earlier homonym. The name proposed by Parish (1883: 191) is accordingly invalid (and I guess a misidentification). Hooker f. and all other authors accepted Reichenbach's merger. Wight did not know the origin of his plant, which he was given by Griffith, but guesses it came from Malacca.

## No. 21. *Epidendrum liliifolium*

### *Acriopsis liliifolia* (Koen.) Ormerod

in Seidenfaden, Op. Bot. 124: 60, 1995.

*Epidendrum liliifolium* Koen., in Retz. Obs. 6: 661, 1791.

*Acriopsis javanica* Reinw. ex Bl., Bijdr. 1825: 377. — For bibliography and synonyms, see e.g. Minderhoud & de Vogel 1986: 9 ff; Seidenfaden 1992: 347; Seidenfaden & Wood 1992: 562; Wood & Cribb 1994: 125.

Type: Peninsular Thailand or Malacca, König, so far no material located.

Distribution: Sikkim(?), Burma eastwards to Indochina and the Philippines, south through Thailand and Malaysia to Indonesia, New Guinea, Australia and the Pacific.

Ormerod found that König's very full and elaborate description leaves no doubt that his plant is conspecific with what we for 170 years have called *Acriopsis javanica*. Ormerod's identification seems verified by small sketches by König in the manuscript in the Linnean Society, they are primitive but show clearly the special characters of the column. Lindley (1840: 537) placed it in his unidentified taxa, Ridley (in Rendle 1933: 1879) suggests *Thecostele* or *Acriopsis*.

It is indeed unfortunate that this identification was not made by earlier students long time ago, the plant is common over a very large area, and as it can hardly be expected that the ICBN rules will be respected by scientists and horticulturists, there may be a case for species-name conservation of *Acriopsis javanica*.

Most likely the type specimen was collected in Phuket or perhaps near Malacca. We have not yet located a herbarium specimen.

No. 22. *Epidendrum calceolariae* terrestre Fl. niueo

*Bromheadia finlaysoniana* (Lindl.) Miq.

Fl. Ind. Bat. 3: 709, 1859. – For bibliography and synonyms, see e.g. Seidenfaden 1983: 11; 1992: 322; Seidenfaden & Wood 1992: 525; Wood & Cribb 1994: 111.

*Epidendrum calceolariae* “terrestre fl. niueo” Koen., in Retz. Obs. 6: 63, 1791. Nom. illeg., non König 1791: 45.

*Bromheadia palustris* Lindl., Bot. Reg. 227: misc. 184, 1841. – Ridley, in Rendle 1933: 187.

Type: Singapore, Finlayson s.n. K!, Wall. Cat 7561 K!

Distribution: Thailand eastwards to Indochina and the Philippines, south through Malaysia to Indonesia and New Guinea.

Ormerod is convinced that König's description covers *Bromheadia finlaysoniana*. Small sketches in the manuscript in the Linnean Society, including a pollinarium confirm this. The species is common in Peninsular Malaysia. König says his collection was made “in nemorosis paludosis prope Malaccam”. We have not yet located a herbarium specimen.

König's epithet cannot be accepted due to his own earlier homonym (see no. 3 above). Miquel's specific epithet goes back to Lindley's *Grammatophyllum finlaysonianum* from 1833 for which Lindley in 1841 used the name *Bromheadia palustris*, applying the Kew rule, which is not acceptable, but which has been used by many authors, e.g. by Ridley (in Rendle 1933: 187) who suggested that name for König's plant.

No. 23. *Epidendrum* Fl. aeris?

*Eria lasiopetala* (Willd.) Ormerod

in Seidenfaden, Op. Bot. 124: 23, 1995.

*Epidendrum* Fl. aeris? Koen. in Retz. Obs. 6: 64, 1791 (misidentification).

*Aerides lasiopetala* Willd., Sp. Pl. 4: 130, 1805. – Hooker f. 1890: 48.

*Epidendrum lasiopetalum* (Willd.) Poir., Encycl. Meth. Bot. Suppl. 1: 384, 1810.

*Dendrobium?* pubescens W.J. Hook., Ex. Fl. 2: T.124, 1825.

*Dendrobium albidotomentosum* Bl. Bijdr. 1825: 345.

*Eria flava* Lindl., Gen. & Sp. Orch. 1830: 65.

*Eria albidotomentosa* (Bl.) Lindl., Gen. & Sp. Orch. 1830: 66. – Seidenfaden 1982: 60, etc.

*Eria pubescens* (W.J. Hook.) Lindl. ex Loud., Hort. Brit. 1830: 372. – For bibliography and synonymy, see e.g. Seidenfaden 1982: 60; Seidenfaden & Wood 1992: 277.

Type: Thailand, Phuket, König, 20 Jan. 1780, herbarium material not yet located.

Distribution: NW Himalaya eastwards through Indochina to Hainan and Hongkong, southward through Thailand and Peninsular Malaysia to Sumatra and Java.



König's name was rightly rejected by Willdenow, who on the basis of König's description coined the name *Aerides lasiopetala*. This was disregarded by later authors, only Hooker f. mentions it, noting that it was "indeterminable". However, there seems no doubt that Ormerod is right that König's description fully covers what many authors through years have called *Eria albidotomentosa*, a widespread entity which is very common in Peninsular Thailand. As noted elsewhere (Seidenfaden 1992: 177) *Eria albidotomentosa* must be considered conspecific with *Eria pubescens* (W.J. Hook.) Lindl. ex Loud., so also this and its widely used synonym *Eria flava* Lindl. will have to be called *Eria lasiopetala* when following the ICBN priority rule.

Exceptionally, König here gives the locality of his collection: "Young Ceylon, Jan. 20. 1780", this is the old seafarers' name for Phuket. I believe this was his last collection before leaving for India.

#### No. 24. *Serapias epidendraea*

##### *Eulophia epidendraea* (Koen.) Schltr.

Die Orchideen 1915: 146 ("*epidendroides*"). – Jayaweera 1981: 168; Seidenfaden, in Matthew 1983: 1605; Joseph 1987: 28.

*Serapias epidendraea* Koen. in Retz. Obs. 6: 65, 1791.

*Limodorum epidendraea* (Koen.) Willd., Sp. Pl. 4: 124, 1805 ("*epidendroides*").

For further synonyms, see Nicolson et al. 1988: 299.

Type: Coromandel, König (no. 3?) BM!, isotype C!

Distribution: Ceylon, Deccan.

This entity is an exception from the other taxa treated by König in his publication, he explicitly states that its distribution is Madras and Trankebar, and it is not found in Thailand or Peninsular Malaysia. It is not clear why König included it in his paper while not including other of his orchid collections from Ceylon or Deccan.

In their interpretation of van Reede's *Hortus Malabaricus* Nicolson et al. (1988: 299) give a rather complete synonymy for *Eulophia epidendraea* (Koen.) Schltr. Looking for authentic material of this taxon, we find that a König specimen in BM and probably originating from the material received by Banks after König's death in 1785 should be considered type specimen of König's taxon, it is labelled "Coromandel, König (no. 3?)". We have in Copenhagen an identical specimen sent directly by König to Vahl, which could be considered an isotype (see Fig. 14). Another identical specimen from the Rottlerian herbarium is at Kew, among the several labels there is one in the Tamil alphabet (written upside down) which I had hoped could give some informa-



Fig. 14. *Eulophia epidendraea* (Koen.) Schltr.  
Type specimen at C of no. 24. *Serapias epidendraea* Koen.



tion on the provenience, but Dr Matthew has kindly deciphered it and find that it gives the vernacular Tamil name, so it is questionable if it could be a König specimen. Finally, there are in Liverpool two sheets from the Royle/Rottlerian herbarium (HR43), this Rottler says he received from his friend Heyne, so perhaps they were not collected by König.

I have been in some doubt about the distinction between *Eulophia epidendrea* and *E. graminea* Lindl. Apart from the dimensions of plant and flowers they seem very similar and sometimes the flower sizes are very close, the ornaments on the lip seem identical. But evidently Hooker f. had no difficulty in separating them and it is noteworthy that König clearly considered them two different species. In BM there is a König specimen labelled *Satyricum zeylanicum* by König, a nom. nud., but obviously identical with *Eulophia graminea*. Duplicates of this are in C and K.

## · A FEW UNPUBLISHED KÖNIG ORCHID TAXA ·

### *Cypripedium* sp.

In his diary König (1894: 137) mentions under 6 December, 1778 that he found a *Cypripedium* and this information must be linked to a short note in the BM manuscript (15: 116) as follows: "*Cypripedium siamensis aphylla*. Scapo nudo vaginis geminis. Radicibus oblongis imbricatis lineatis maximis. Flores rosea".

This plant must be a *Paphiopedilum*, but the above note is hardly sufficient for an identification. The "Flores rosea" is intriguing, we have no red-coloured *Paphiopedilum* in Thailand. The only Thai *Paphiopedilum* recorded from the area around Bangkok is the widespread *P. concolor* of which I have seen no rose-coloured forms.

We can hardly reach an identification of the König plant unless material is found in the herbaria. He found it on his trip along the Menam River to Ayut-thaya where he visited the areas plundered by the Burmese some years earlier, naturally it cannot be excluded that we have to do with a cultivated plant from a garden of one of the burned-down monasteries.

### *Epidendrum biflorum* Koen.,

nom. nud., in Lindley, Gen. & Sp. 1830: 33.

As mentioned above, Lindley under his *Liparis gregaria* adds the observation: "*Epidendrum biflorum* König Mss. in Zeylona lectum, forte hujus loci". As Lindley has no other references to König's manuscripts, but takes his König referen-

ces from Willdenow, it seems natural to assume that he has his knowledge from a König herbarium specimen now located in the British Museum (no. 44620).

This sheet carries three plants. It is labelled "*Epidendrum* Ind. orient. König" on the front side and on the back side "*Epidendrum biflorum* habitat in sylvis ad ramos arbrum" probably in König's hand. At the base on the front side is the name "*Liparis disticha* Lindl.?" I believe in Lindley's hand, this is the name Lindley originally used for the *Malaxis disticha* of Thouars before introducing his name *L. gregaria*.

The long slender fruits, longer than the leaves, show this to be a *Thrixspermum*. There is a flower left on two of the plants; I have not wanted to dissect them, but agree with Ormerod, who has also studied the BM plant, that it must be referred to *Thrixspermum pulchellum* (Thw.) Schltr, a plant unknown to Lindley when he wrongly referred König's plant to *Liparis*. Sterll has located König's full description of *Epidendrum biflorum* in the BM manuscripts nearly a hundred years before Thwaites established his taxon, but it is obviously without any nomenclatural consequence as it remained unpublished.

At Kew with a Herb. Rottl. label is a similar specimen identified by Hooker f. as *Trixspermum pulchellum*, according to the glued-on sketches this originated from Herb. Peradenya for which reason I have doubted if it could be a König specimen. I may have been misled by the place of the sketches on the sheet, they may belong to a Champion collection placed below on the same sheet.

***Epidendrum Herba Supplex* Koen. nom. nud.**

in sched., non Koen. 1791: 37.

This entity was discussed above (p. 18). König used the same name for two different species, the one with a published description is referable to *Oberonia* the second referred to *Dendrobium concinnum* Miq.

***Satyrium zeylanicum* Koen., nom. nud.**

in Trimen 1898: 176.

As mentioned above (p. 15), König used this name on specimens now located in BM, C and K. This remained unpublished except for the mention by Trimen, the plants are referable to *Eulophia graminea* Lindl.

***Wanna Ladja Cingalensium* Koen. in sched., nom. nud.**

In BM (no. 44944) is a sheet I believe annotated by König under the above name and "Florus hujus plantula nondum repari imjus. Folia colore coccineo venri aureus-luteis nitidio nitidioforme picta Ceylon, König." The name is obviously a preliminary construction with base on a local vernacular name.

This is clearly an *Anoetochilus*, and somebody has on the sheet referred it to *Anoetochilus setaceus* Bl. which is the name used by Jayaweera (1981: 305) for his only representative of the genus in Ceylon. But there seems to me to be considerable confusion in earlier literature, a few points may be mentioned here: Blume, who in 1825 had established *Anoetochilus setaceus* on the basis of a Javanese plant (and by Comber (1990: 39) considered endemic there), later found the Ceylonese plant to be a separate species, *A. regalis* Bl. (coined after a local vernacular name, Wana Raya), which Jayawera has in synonymy, he also lists in synonymy *Chrysobaphus roxburghii* Wall., that taxon is known as *A. roxburghii* (Wall.) Lindl., a widespread entity from NW Himalaya eastwards to China and Indochina (cf. Seidenfaden 1978: 52 etc.); nevertheless, Jayaweera considers his plant endemic in Ceylon (his only non-Ceylonese record, Carr 3084 from Borneo, is by Wood & Cribb (1994: 373) believed to be *A. longicalcaratus* J.J.Sm.). Another view is expressed by Pradhan (1976: 121) who proposes an *A. roxburghii* var. *regalis* (Bl.) Pradhan with *A. regalis* Bl. as basionym and an "*A. setaceus* Lindl." in synonymy, of this he has a colourphoto after a collection from Meghalaya, stating that this is the first record of the entity outside Ceylon. Sathish Kumar & Manilal (1994: 18 & 64) have an *A. regalis* as endemic in Ceylon and Deccan, while they list *A. roxburghii* as endemic in Indian Himalaya. So it seems that further studies are necessary for clarification, — obviously the single find by König will be of marginal interest for such study, being without inflorescence.

## · CONCLUSIONS AND SUMMARY ·

**B**ASED on König's elaborate descriptions identifications have been attempted for the 24 taxa and we believe that with one exception (no. 6A *Oberonia* sp.) we can be quite sure about the identity, — we believe we can confirm six cases where König's specific epithets already have been accepted by earlier authors with transfers to other genera.

A search in different herbaria has so far resulted in the find of 11 cases of König collections that confirm the identifications. Photographs of some of these specimens are supplied.

Like his contemporaries König was usually not interested in supplying the exact dates or locations of his finds, neither in the publication nor on herbarium sheets. By study of published and unpublished information we have in several cases been able to find a date for the collection and thereby its location, in other cases we can only supply suggestions, in those cases we have been led by the firm impression that König in his paper placed the 24 taxa in chronological order of the collections. Guided by his diary we believe all but



the last, which must have been added to the manuscript after the return to Madras, were collected during his long trip to the Malayan Peninsula, the majority (no. 1-13) obtained during the long stay at Phuket, Thailand, the following (nos 14-22) when visiting Malacca. His last collection during the trip (no. 23) was made in January 1780 during the short stay at Phuket just before his return to Madras.

Today we have a rather good knowledge of the orchid flora of the areas visited by König. It comes as no surprise that we find that all König's collections are referable to species common there. There are no new species in König's collections (except perhaps the no. 6A, *Oberonia*), but study of related material has led to the establishment of one new species, *Thrixspermum walkeri* Seidenf. and the recognition as a separate new combination *Papilionanthe cylindrica* (Lindl.) Seidenf., none of these represented in König's material.

The fact that König in 1791 got published fully satisfactory descriptions and names to plants, today known under other names, raises a series of nomenclatural questions, different from case to case. We have attempted under each of the 24 taxa to find the correct names valid today.

As mentioned above, in six cases earlier authors have reached a solution by accepting König's specific epithet, just making a transfer to another genus than *Epidendrum*, These are:

- No. 4. *Appendicula hexandra* (Koen.) J.J. Sm. for *E. hexandra*.
- No. 7. *Trichoglottis orchidea* (Koen.) Garay for *E. orchidea*.
- No. 10. *Thrixspermum clavatum* (Koen.) Garay for *E. clavatum*.
- No. 11. *Papilionanthe subulata* (Willd.) Garay for *E. subulatum*.
- No. 13. *Eria tomentosa* (Koen.) Hk. f. for *E. tomentosum*.
- No. 24. *Eulophia epidendraea* (Koen.) Schltr. for *Serapias epidendraea*.

In connection with the above taxa the following new synonyms are proposed:

- Trichoglottis cirrhifera* Teijsm. & Binnend. = *Trichoglottis orchidea*.
- Thrixspermum ciliatum* Schltr. = *Thrixspermum clavatum*.
- Thrixspermum infractum* Schltr. = *Thrixspermum clavatum*.
- Thrixspermum ridleyanum* Schltr. = *Thrixspermum clavatum*.
- Papilionanthe teres* (Roxb.) Schltr. = *Papilionanthe subulata*.

As noted above, contrary to some authors I have excluded *Aerides cylindrica* Lindl. from the synonymy of *Papilionanthe subulata* and consider it a separate species, *Papilionanthe cylindrica* (Lindl.) Seidenf., cf. p. 33.

Two of König's names must be rejected because they were published a year later than Loureiro's publication:

- No. 1. *Epidendrum spathulatum* is *Aerides odorata*, and
- No. 9. *Epidendrum complanatum* is *Thrixspermum centipeda*.

No. 23. *Epidendrum flos aeris*? is a misidentification, the plant was called *Aerides lasiopetala* by Willdenow 1805, the present name is *Eria lasiopetala* (Willd.) Ormerod.

For three taxa König's name would have priority, but the specific name is unavailable in the genus where they belong, so a later synonym has to be used. These are no. 3 *Epidendrum calceolariae* which must be called *Dendrobium acerosum*, no. 12 *Epidendrum nudum* is *Dendrobium pachyphyllum* and no. 16 *Epidendrum longiflorum* is *Bulbophyllum vaginatum*.

A somewhat similar case is no. 16 *Epidendrum saaronicum*, here we have against the rules preferred to use the younger well-known name *Dendrobium crumenatum* on account of the still unclarified taxonomical and nomenclatural history in the period before Swartz's publication in 1799.

The remaining 11 taxa may nomenclaturally be discussed in two groups, Firstly, we have five taxa where König's specific names must be respected, but in new combinations as follows:

No. 5. *Epidendrum ophrydis* should be called *Malaxis ophrydis* (Koen.) Ormerod.

No. 15. *Epidendrum lycopodioides* will be *Oberonia lycopodioides* (Koen.) Ormerod.

No. 17. *Epidendrum flabellum veneris* will be *Cirrhopetalum flabellovenensis* Seidenf. & Ormerod.

No. 19. *Epidendrum plantaginifolium* will be *Phreatia plantaginifolia* (Koen.) Ormerod.

No. 21. *Epidendrum liliifolium* will be *Acriopsis liliifolia* (Koen.) Ormerod.

Secondly, we have the taxa where König's names are illegitimate. For no. 6 he has used a pre-Linnean epithet, we consider the plant to be an unidentified *Oberonia*. Also no. 22 must be considered unacceptable, it is *Bromheadia finlaysoniana*. For no. 8 we have an earlier homonym (Linné 1753), the present name we suggest should be *Taeniophyllum pusillum* (Willd.) Seidenf. & Ormerod. No. 2 was occupied by Swartz 1788, we refer the plant to *Malaxis calophylla* and no. 20 was likewise used by Swartz 1788, we refer the plant to *Bulbophyllum clandestinum* following Hooker f.

Finally, no. 14 *Epidendrum bidentatum* is younger than *Epidendrum concretum* Jacq.

It should be noted that the several new names and new combinations summarized above if accepted result in the disappearance into synonymy of some quite well-known names such as *Acriopsis javanica* Bl., *Bulbophyllum lepidum* (Bl.) J.J. Sm., *Eria pubescens* (W.J. Hook.) Lindl. ex Loud., *Malaxis latifolia* J.E. Smith, *Oberonia anceps* Lindl., *Papilionanthe teres* (Roxb.) Schltr. and *Trichoglottis cirrhifera* Teijsm. & Binnend. This cannot but be met with displeasure and animosity from many scientists and horticulturists, and some

might find that there could be good reasons for initiation of a species-name conservation procedure in some cases. This naturally would involve a disrespect for an exceptional pioneer whose "long forgotten names" are no fault of his own but rooted in the negligence or inattention of generations of scientists. Anyway, the present treatment might be useful when searching for concrete examples in the standing discussion on the use of "Names in Common Use". Here I fully share the misgivings expressed by e.g. Brummitt (1994: 13) fearing development towards a situation where each of us would be permitted to select our own personal "Common Names", resulting in general chaos. Any introduction of a "Common Name" diverging from our basic rules would have to be based on an agreed procedure, and the tasks of a Nomenclatural Committee for this purpose would be too formidable to contemplate.

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